MEAT AND FOOD INSPECTION

BY

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WITH

Regulations Governing Meat Inspection in the United States

BY

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CHICAGO

W. T. KEENER & COMPANY

90 WABASH AVENUE

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PREFACE

The subject of Meat and Food Inspection is so important and interesting that the small amount of attention paid to it by the student of public health is cause for surprise.

Every student of medicine possesses the requisite knowledge of pathology which will enable him to pronounce opinions upon the varied post-mortem conditions encountered among animals intended for human food. The layman of intelligence who gives the subject close study can also be trusted to form a judgment as to the fitness or otherwise of meat for human consumption. It is not suggested that the position of the veterinary surgeon should be usurped. His pre-eminence is recognized by statute, since the Public Health Acts demand the production of a separate report from a duly qualified veterinarian when living animals are to be examined.

Since few sanitary authorities can afford to retain the services of a veterinary inspector whose time would be devoted to the systematic examination of living and dead animals, it is the duty of every public health official to perfect his knowledge, so that he may fill an existing gap in the administrative machinery of present-day sanitation.

Special effort has therefore been made to deal, as fully as the limits of this volume would permit, with such questions as housing of dairy stock, the control of the milk traffic, and the distribution of milk. The milk traffic in Great Britain is in a most unsatisfactory condition. It is only by combined and intelligent effort that it can be raised to a uniform level of excellence.

Slaughter-houses and meat inspection have also been carefully considered, in order to arouse interest in a traffic which in many

instances is supervised in a very slipshod fashion, and not infrequently by incompetent persons. The embodiment of the laws bearing upon food, housing of animals, etc., will, it is hoped, enhance the utility of the book for the busy official, for whose benefit the leading decisions have been included under their respective sections. To R. H. Miller, S.S.C., Public Prosecutor, Leith Burgh, I am specially indebted for the painstaking care he has bestowed upon this section of the book. His great experience entitles him to deal in an authoritative manner with the many important and interesting decisions he has collected and condensed. My thanks are also due to Dr. Charles Porter, Medical Officer of Health, Finsbury, for his trouble in revising the proofs.

The student who desires to acquire a more intimate knowledge of meat inspection cannot do better than read Ostertag's excellent 'Handbook of Meat Inspection.'

W. ROBERTSON.

LEITH,
February, 1908.

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MEAT AND FOOD INSPECTION

CHAPTER I

INTRODUCTORY

Preliminary considerations—Tuberculosis among cattle—The unsatisfactory conditions under which animals are housed—The difficulties of the official—Foreign meat and its freedom from tuberculosis—Out-door life a preventive.

EVERY public health official, be he a medical officer of health or sanitary inspector, ought to be competent to advise, examine, and report upon foods of various kinds. Too little attention has been paid to this branch of the student's studies. Any knowledge gained has been of a perfunctory nature—sufficient, in fact, to enable the student to answer a few questions at an examination.

Now that increasing attention is being centred upon the milk and meat supplies of this country, greater care and skill will be expected in the administrative control of foods. It will only be when an army of well-trained sanitarians makes its presence felt throughout the country that the necessary level of excellence will be reached. It is to be hoped that legislation will not be a-wanting to assist the official. At present there is a lack of uniformity in the control of meat and milk supplies in Great Britain and Ireland.

This condition of affairs is neither creditable to this country, nor is it satisfactory either to the retailer or the consumer.

The questions underlying the collection, storage, and preparation of foods are full of importance. Endeavour has been made in the subsequent pages to arouse a new interest in the subject by dealing with it in a manner which differs from that usually followed. To thoroughly master the subjects dealt with, the student is strongly

advised to make repeated visits to slaughter-houses, cowsheds, etc. He will soon realize that this branch of public health work is full of varying interest. For instance, after he has paid a few visits to a slaughter-house, he will be struck with the fact that tuberculosis among cattle is very prevalent, and that many carcasses are rendered unfit for human food on account of the presence of tuberculosis in them.

Closer investigation will prove that such animals as have been confined in dark and ill-ventilated sheds are the worst sufferers from this disease. Horses and sheep are very rarely affected by tuberculosis, their mode of living protecting them. Only occasionally does one meet with tuberculosis in the pig. The writer has, however, encountered tuberculosis in piggeries attached to large creamery establishments where part of the animals' feeding consisted of by-products from the surplus milk, the probable explanation of this occurrence of tuberculosis among the pigs being the consumption of milk containing tubercle bacilli, coming, no doubt, from infected udders.

A cursory examination of the usual type of cowshed of the present day will, by its general unwholesomeness, reveal why tuberculosis is so common among dairy cows. The dairyman dislikes light and ventilation. Too much light, he maintains, interferes with the feeding of the animals by permitting them to see so well that they are readily startled. The hollowness of this argument may be instantly proved when one learns that in the best dairying counties of England and Scotland the more enlightened farmers invite light into their cowsheds. Ventilation, according to the conservative-minded cow-feeder, is productive of draughts, which in turn cause chills, 'weeds' (mastitis), with consequent shortage of milk. Any intelligent person knows that a good system of ventilation will not induce draughts, also that any interior unprovided with means for the inlet of fresh air and the outlet of foul air must become an unhealthy place. Cows accustomed to live like hot-house plants will, when exposed to a cold atmosphere, undoubtedly yield smaller quantities of milk. On the other hand, cows trained to live in temperate and well-ventilated byres give a better and more uniform supply of milk than their less fortunate fellows.

It is accordingly not difficult to understand why cows destined to be stalled from one year's end to another in insanitary sheds are very prone to suffer from tuberculosis. As has been said, experience at the slaughter-house soon proves this to be true.

The adoption of regulations dealing with the construction of cowsheds, and systematic inspections by sanitary officials, have done much to improve the lot of the unfortunate cow. But when one knows that in many districts no regulations have been framed, and where framed, are frequently not zealously enforced, one cannot wonder why tuberculosis is so common among dairy stock.

Cowsheds should not be permitted within the environments of our large cities. Unfortunately, no statutory powers compel the removal of cowsheds to the outskirts of towns. If a cowshed can be proved to be a nuisance, or is causing injury to the health of the citizens, proceedings may be taken to have the nuisance abated ; but one would be loath to take such a drastic step against an owner whose premises are either comparatively new or of good sanitary construction, and in conformity with the regulations framed by a local authority.

Should a cowshed be in a dilapidated condition, it may be condemned as unfit for use as a place for housing animals. If the owner is proprietor of the ground on which the condemned shed stands, he may, unless local acts or by-laws provide against it, proceed to build a new set of premises. No law enables one to anticipate a nuisance. If the official could prevent the erection of cowsheds where they are likely to give rise to nuisances, the gradual extinction of town cowsheds might be early hoped for. As matters stand, one must wait until a nuisance actually occurs before taking any action.

Many cows, after ceasing to yield milk, are retained and fed in the cowshed, with the object of being sold to the butcher. The flesh of these animals is never very satisfactory, since it is coarse, dry, and lacking in the fatty marbling, characteristic of healthy beef.

It is a significant fact that, since the importation of large quantities of foreign animals and frozen beef became possible, the trade of our slaughter-houses has largely diminished. These foreign animals are in as good, if not better, condition than home-fed

cattle, and butchers have found it to their interest to deal in other than home-fed stock, the purchase of which has attached to it the risk of condemnation on account of tuberculosis. In passing it may be explained that a system of mutual insurance on behalf of dealer and buyer may obviate any risk of loss. But in the trade they do not see eye to eye with regard to insurance: the system is accordingly not a universal one. Where it is in operation it works well.

To return to foreign meat, it may be said that it is very free from tuberculosis, because the slaughtered animals had been accustomed to lead an exclusively outdoor life.

In this country tuberculosis is not common among stock grazed in the open, Highland cattle being noteworthy examples of this truth. Irish cattle for the same reason are healthy, though the poor pasture on which they feed causes them to be very thin. The natural robustness of these lean animals from Ireland renders them eminently suitable for dairying purposes. True, they do not yield so much milk as, for instance, the delicate and pure-bred Ayrshire cows, but they resist the onset of tuberculosis when confined in cowsheds. With these facts before him the student will be more able to appreciate the points that should be attended to in the designing of hygienic cowsheds.

CHAPTER II

THE SITES, STRUCTURE, AND VARIOUS TYPES OF COWSHEDS, PIGGERIES, AND STABLES

Arrangement of farm-buildings and their amenities—Milk stores—Materials used in building cowsheds.—Internal structure, roof, smooth walls, floors, stalls, feeding-trough, manure channel—Water-supply, lighting, sizes and positions of windows—Ventilation, temperature of internal air, sizes of inlets and outlets, positions of these—Changes of atmosphere necessary—Cubic capacity: requirements of regulations—Country cowsheds often unsatisfactory—Floor space—Sizes of stalls—Drainage of cowsheds, position of gully-trap, slope of manure-channel necessary—Piggeries and pigsties, proximity to dwelling-houses—Control only possible if by-laws exist.—Methods of housing pigs, structure of sties—Necessity for cleansing—Occurrence of swine fever—Piggeries—Set of by-laws—Stables—cubic capacity, structure, drainage, relation to living-rooms.

It has already been said that cowsheds should not be built in towns, but in country districts. While this assertion may be true, and the principle an ideal one to advance, it must be qualified by the statement that it is better to permit cowsheds in towns where a strict and efficient control is exercised over them than in districts where laxity in administration is often conspicuous. Cowsheds in country districts must be erected on dry soil, and on a spot which can command shelter from north and east winds. In such a work as this one cannot pretend to enter fully into the question of disposition of buildings about a farm. It will be sufficient to indicate that, in the planning of the buildings, economy of labour must be kept in view. This is achieved by correct grouping.

When a farmer is chiefly concerned with the rearing and feeding of stock for the butcher, the granary and food-preparing houses must be in direct communication with the cattle-sheds. Every

facility must also be provided for the expeditious feeding of the animals. In the case of the dairy-farm, on the other hand, the chief concern is the adequacy as well as the convenience of the rooms where milk is stored or mixed for distribution and sale. The provision of places for the cleansing and storing of milk vessels must also be ample, and in close touch with the milk-house.

Most farms are arranged in such a way that the sheds, stables, and outhouses form a square. This plan is a labour-saving one. In connection with dairy-farms, it must be kept in mind that the milk-houses must have no internal communication with cowsheds nor with dwelling-houses. The latter condition is one that ought to be strenuously urged and enforced. Manure-heaps must not be in close proximity to stored milk; piggeries ought to be as far away as possible.

It might be well to indicate in passing the features which ought to characterize a good milk store attached to a dairy-farm. In the first place, the inside walls, floors, and ceiling ought to be smooth. Cross-beams in a milk-house harbour dust and spiders' webs. A lath-and-plaster ceiling is a good type of structure to adopt. Cement on the inner aspects of the walls, with concrete floors, will provide the smooth surfaces desired. The temperature in a milk-house ought to be equable. To secure this the walls ought to be double, with the window or windows facing north. A double wire-woven network may take the place of double-glass windows. Fine netting, though generally favoured, is not an effective barrier against dust, especially in warm and dry weather. Lastly, the shelves ought to be of some impervious material—*e.g.*, iron or slate slabs.

Material.—A good cowshed should be built of stone or brick. Wooden erections may be wind and water tight during the early months of their existence, but traces of disrepair gradually manifest themselves. Moreover, woodwork about the walls, or in close proximity to the stalled animals, is to be deprecated, since the aim must be to secure impervious internal surfaces.

The **roof** may be constructed of any durable material, such as slates, red tiles, or corrugated iron. The only woodwork permissible in a cowshed should be found in the windows, roof and cross-beams. Though it may add to the initial expense of erection, it will be well

to advise the varnishing of all internal woodwork. This facilitates the periodical sweeping down and cleansing of interiors.

The cowshed of the careless dairyman usually harbours quantities of spiders' webs among the rafters and cross-beams. Any suggestion of slovenliness is stoutly denied by the farmer, who declares that cobwebs are effectual traps for flies, thus freeing the cows from molestation, the dust on the cobwebs being a secondary consideration. When the supporting beams of the roof rest on the wall head, recesses for dust and cobwebs should be obviated by beam-filling (Figs. 1, 2, 5).

Inside Walls.—Where expense is not to be seriously considered, in order to make the cowshed perfect, the inside walls may be covered up to the wall head, or to the height of 6 feet, with enamelled bricks or ½-inch tiles. Subsequent cleansing of the walls is thus made easy, and the brightness of the interior greatly enhanced. Usually the internal wall surfaces are rendered with cement to a height of 6 feet. But in all new cowsheds cementing ought to be carried right up to the wall head.

Floors.—It is of primary importance that the floors should be of good construction and impervious to moisture. The best material to employ for flooring is concrete covered with a layer of cement, or Caithness flagstones with a rough graining. The disadvantages of the latter are that in the course of time, and especially if not well bedded, depressions are liable to occur at the junctions of the slabs. Fortunately the stock-owner agrees that cement laid on concrete is the best composition for the construction of floors. In the stalls of the animals, as well as along the feeding passages, hard blue bricks may be employed, but never in the manure channel itself, since the many junctions and indented surfaces of the bricks offer every facility for the lodgment of filth. The bottom and sides of the manure channel should be rendered smooth with cement.

A problem that has not been solved is the provision of a stall floor composed of material that will be easy on the reclining animals' knees. Tar macadam is objectionable, because the heat of the animals' bodies will soften the flooring, and by adhering to the teats will taint the milk. The hardness of the bed for the animal may be overcome by the provision of straw or clean non-odorous bedding. Unfortunately straw is not a cheap commodity, conse-

quently the cows often suffer from the ill-effects of hard stall floors. A floor constructed in whole or in part of earth, wood, or porous bricks ought to be unhesitatingly condemned. With regard to the stall itself, that portion on which the animal stands ought to be level, but immediately beyond should show a slope of 1 to 2 inches towards the manure channel.

The Stalls.—Consideration has already been given to the flooring of the stalls. The partitions of the stalls, known as division blocks, should be smooth and plain, stone or slate slabs, blocks of concrete covered with cement, or, better still, cast-iron, being utilized. Wooden division blocks are only to be found in old cow-sheds. As a rule cows are stalled in pairs, and while the length of 8 feet is allowed for each stall, its breadth is usually limited to 7 feet 6 inches. The latter measurement is too small for the comfort of the animals, but economy in cost leads to economy in space in the erection of most cattle-sheds. When animals are singly stalled, the breadth between division blocks ought not to be less than 4 feet. The height of the division blocks need not exceed 5 feet.

Feeding-Trough or Manger.—For the comfort of the animal the feeding-trough must not be too high. It is usually built in a little above the level of the stall floor. When animals are stalled in pairs, the feeding-troughs should be separated from each other by an intervening space of one foot. This prevents the animals from stealing one another's food. Cows consume large amounts of water, and ample provision ought to be made for providing the animals with this commodity. It is a common practice among dairymen to mix salt among food-stuffs in order to induce the cows to drink large quantities of water, with the object of promoting the flow of milk. The best mangers are made of glazed stoneware or enamelled iron, care being taken that all corners are well rounded to facilitate cleansing, and to prevent the deposit and lodgment of dirt.

Manure Channel or Grip.—Immediately behind the stall is the manure channel, which ought to be at least 2 feet wide and 6 inches deep. To aid the flow of urine the floor of the manure channel is sloped as shown in Fig. 5. To expedite the flow of urine some authorities advocate the provision of a narrow channel deeper than the manure channel, and running alongside it. It remains to be said, however, that this additional channel will

militate against the easy and rapid bi-daily clearing away of manure from the grip, since a brush or shovel is likely to sweep solids into the narrower channel.

Water-Supply.—The water-supply of a cattle-shed must not only be ample, but of unimpeachable purity. It must be ample in order to render it possible to periodically flush out every portion of the interior of the shed. This can be best achieved by leading water-pipes into the interior of the shed. A hose-pipe will complete the equipment for douching floors, manure channels, etc. Contaminated water will act injuriously upon the animals by producing diarrhœa. Needless to say, the employment of such water to wash out butts, milk-cans, etc., is not only reprehensible, but dangerous. How a water-supply is to be safeguarded against pollution need not be discussed here.

Lighting.—The old-fashioned ideas adhered to by some owners of stock regarding the evil influence of light must be brushed aside by putting regulations into operation. If dark interiors are unsuitable for human habitations, want of light is also inimical to the health of cattle and other domestic animals.

Diversity of opinion exists regarding the position of windows for lighting purposes. Some authorities insist upon having only roof-lights facing north; others believe in the provision of windows on the walls. Which method is to be preferred is quite immaterial. The point to be aimed at in all cowsheds is the provision of 3 square feet of window space to each stalled animal. The great advantage possessed by windows on the side, or gable walls, is that they may be utilized not only for lighting, but also for ventilating purposes. This will be possible if each window in whole or in part is constructed to open inwards on bottom hinges.

In order to maintain wholesome interiors, and to ensure that the animals are kept in a cleanly state, the lighting of a cattle-shed must be one of its most important features.

Ventilation.—An ill-ventilated house or cowshed is an abomination. Its very unwholesomeness makes one marvel how the inmates can preserve their health. If we are ever to eliminate tuberculosis from our home-fed cattle, we must drill the stock-owner until we convert him to appreciate the incalculable benefit of fresh air. Only a sentence is necessary in which to remind the

reader how great a revolution has been wrought in the treatment of human tuberculosis by the rigorous application of the fresh-air system. In the Manchester Zoological Gardens monkeys born in Central Africa have, in order to safeguard them against tuberculosis, been trained to live in cages the fronts of which are freely exposed to the open air. We must therefore strenuously advocate the fresh-air cult to every cow-feeder of the British Isles. It is a complete fallacy to declare that animals, more especially milk-cows, will neither thrive nor yield good supplies of milk in cool interiors. They can be immunized against chills by being gradually inured to cool temperatures. The term 'cool' is used in a comparative sense, since the interior of the average cowshed usually reaches a temperature of between 64° to 70° F. What should be aimed at is a maximum varying between 55° and 58° F. Those who have adopted the principle of cool interiors and believe in it are the best vouchers for the statements that have been made on this point.

Unfortunately the regulations framed by the Local Government Board are extremely vague on this important question. All that is demanded in a cowshed is that there must be 'sufficient' ventilation. A theoretical sufficiency is one thing, but a practical one is quite another. The aim must be to secure a change of the internal atmosphere thrice every hour. The smaller the cowshed, the more irksome will this change be to the stalled animals. In large cowsheds, on the other hand, ventilation will be much more easily put into operation by means of suitable inlets and outlets.

Elaborate systems are neither necessary nor practicable, because they will be neglected, and simple methods are perfectly satisfactory. At the same time too literal a meaning must not be taken from the latter statement, since to permit the provision of too elementary structures—*e.g.*, drain-pipes of 2 or 3 inches' diameter—to act as inlets and outlets, and placed near the wall head, is an obviously wrong and half-hearted attempt at providing adequate ventilation. As soon as cold weather sets in every one of these small openings will be blocked with straw or sacking, unless they are protected by iron gratings built into the wall.

Windows on the side and end walls opening inwards, on the principle of the Sheringham valve, will be found to act as efficient inlets. The outlets should be on or near the ridge of the building.

In windy weather those windows on the exposed side of the cowshed may be shut, the others being left open in part or in whole. If the windows on the end walls be placed sufficiently high, and made to fall inwards like the others, on bottom hinges, they will, when open, act as efficient outlets.

A louvre along the ridge of the cowshed can be controlled by flap-valves, so that the side exposed to severe winds may be closed at will. Howard's revolving ventilators are most powerful extractors of foul air, but depend upon wind for their efficiency. In stormy weather, if the side windows be open, revolving ventilators, if numerous, may be too efficient in the sense that they will induce too sudden changes in the internal temperature. These ventilators can also be controlled by valves placed over their internal openings.

Where the cows face the wall with a feeding passage intervening between the animal and the wall, ventilating grids may be placed in the wall on a level with the floor. If these are controlled by flap valves, they can be put in or out of action according to the direction and force of the wind.

In one cowshed visited open gratings formed in the internal sills of full-sized windows acted as most efficient inlets. In this instance, too, there was a feeding passage 4 feet broad between the wall and the cows. Only where expense is no barrier will the principle of heating incoming air be adopted. During the colder months of the year the heating of incoming air has much to be said in its favour, because at the risk of partially asphyxiating the stalled animals every cranny is closed up by the dairyman to keep out the keen frosty air.

To assist in obtaining a thrice-hourly change of air in a cowshed the capacity of each inlet ought to be between 30 and 40 inches square for each stalled animal. The outlets must be the same size. With a moderate wind blowing the dimensions given will be ample. In still weather such openings and outlets will err on the side of being too small. Cowsheds in towns are often surrounded by high buildings which greatly interfere with air-currents. Under such circumstances each inlet and outlet should never be less than 40 square inches. In exposed positions, on the other hand, all ventilating openings must be controlled by suitable valves.

When cattle are tethered with their heads close to the wall the

fresh-air inlets ought to be placed at least 7 feet from the floor level. On the other hand, when the animals stand with a passage intervening between them and the wall, the inlets, as has been said, may be placed at the floor level or slightly above it.

Down draughts must be avoided by the provision of louvred ventilators along or near the ridge, or by Howard's revolving ventilators (see Figs. 6, 9).

Too much importance cannot be attached to this question of ventilation, since, as has already been said, the elimination of tuberculosis among home-fed cattle depends upon well-aired cowsheds.

Cubic Capacity.—Closely allied to ventilation is the question of cubic capacity. Some authorities urge that the requirements of the Local Government Board are inadequate ; but it is only with these regulations we can deal. Moreover, as has already been pointed out, the proprietor's first concern in the erection of a farm building is to keep down cost. When the prospective builder of a cowshed knows that by providing 800 cubic feet of space for each cow he can meet the requirements of a local authority, it is idle to expect him to build a shed showing a capacity of 1,000 or more cubic feet per head. While 1,500 cubic feet may be theoretically and hygienically a sound minimum, one cannot go beyond the present-day recommendations of 800 cubic feet. As it is, the cubic space demanded is considered by cattle-feeders to be far too liberal.

In towns, where cows are not privileged to graze on pasture, but are confined from one year's end to another, the minimum for each animal is 800 cubic feet of air-space. In country districts, on the other hand, the space set down is 600 cubic feet. While the former measurement may escape criticism, it remains to be said that the construction and amenities of a great many country cowsheds leave much to be desired. Accordingly, in winter, when the sheds are occupied both by day and night, the atmospheric pollution favoured by the limited cubic space recommended is great.

Even in towns, where the supervision of byres is frequent, it is very difficult to enlist the co-operation of the dairymen to provide proper ventilation. The imagination must be left to surmise what the conditions in country cowsheds are at certain seasons of the year, since these byres are only inspected at wide intervals.

In measuring the cubic space of a cowshed. the regulations

stipulate that 'no space shall be reckoned which is more than 16 feet above the floor; but if the roof or ceiling is inclined, then the mean height of the same above the floor may be taken as the height thereof for the purpose of this regulation.'

The minimum floor-space permissible for each animal should be between 50 and 60 square feet.

From a health point of view, and for the comfort of the animals, they ought to be stalled singly; but single stalls are, by reason of additional cost, seldom employed. When cows are stalled in pairs they breathe into one another's faces, the stalls, as usually constructed, being much too narrow. The sizes of the stalls may be regulated to suit different breeds. For instance, young Ayrshire, Jersey, and Kerry cows do not require a stall longer than 7 feet, the breadth of stall being between 6½ and 7 feet. For larger breeds the length should be 8 feet, and the breadth a little less, say, 7 feet 9 inches. The length measurements include the feeding-trough space.

Drainage.—The capacity and construction of the manure channel or grip have been given. It, however, remains to be said that all drain inlets must be situated *outside* the walls of cowsheds. In this direction alone many cowsheds offend. The grip must, accordingly, empty its liquid contents into a gully trap situated outside the cowshed. The fall in the grip from one end of a byre to the other should be at the rate of 1 inch in 30 inches. From the trap there must be properly jointed stoneware or fireclay pipes leading to a catch-pit, where solids may be arrested before reaching the sewer, if connected with such. A large and properly constructed trap (see Fig. 13) will obviate the need for a catch-pit. If a cess-pool be necessary, it must be constructed with an impervious bottom and sides.

Various Types of Cowsheds.

Having detailed the requirements of a hygienic cowshed, it remains to be said that sheds of four types are in use, the fourth described being of comparatively recent adoption in this country.

Taken in their order of frequency, we find those byres most common in which the cows are tethered with their heads quite close to the wall. This type is the cheapest to build, and having

become a stereotyped pattern, finds most acceptance with a class of men who rebel at the bare suggestion of novelty in design and construction as applied to cowsheds. In this type ventilation is rarely satisfactory, and when the weather is mild and wind absent, the atmosphere in a shed accommodating twenty or thirty animals is usually offensive and oppressive. The cows breathe and rebreathe their own and their neighbour's air. Their heads are really in a cul-de-sac formed by the wall in front, the division-blocks at either side, and the animals' bodies behind (see Fig. 1).

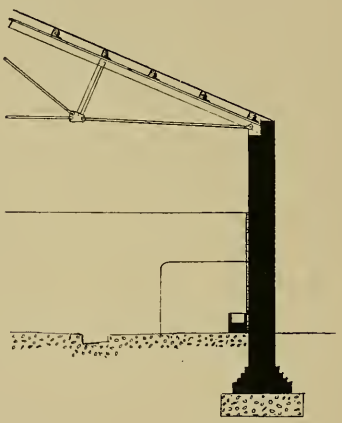


Fig. 1.—Section of one side of Cowshed illustrating the Method of Stalling Cows with their Heads close to the Wall.

In such cowsheds, if badly lighted and ventilated, tuberculosis and itch may be confidently looked for, itch being an invariable accompaniment of filthy interiors and improperly groomed animals.

The second type is a much better one, its appearance at once impressing one with its hygienic superiority over the first-described cowshed. In this instance the cows face one another across an intervening passage running throughout the length of the byre, this central 'feeding passage,' as it is known, not being less than 4 feet broad. At the rear of the cows is the 'grip,' and behind that, again, another 4-feet passage or gangway for those engaged in milking or cleansing operations. To be of hygienically sound design, there should be no obstructing wall at the animals' heads, since it

only favours the formation of a cul-de-sac. The obstructing wall which is usually built is intended to prevent the animals from pushing their bodies forward, and thereby soiling their beds. This tendency can be overcome by an efficient system of tethering, or by running iron bars in front of the cows, care being taken to avoid the possibility of the animals pushing their heads and horns between

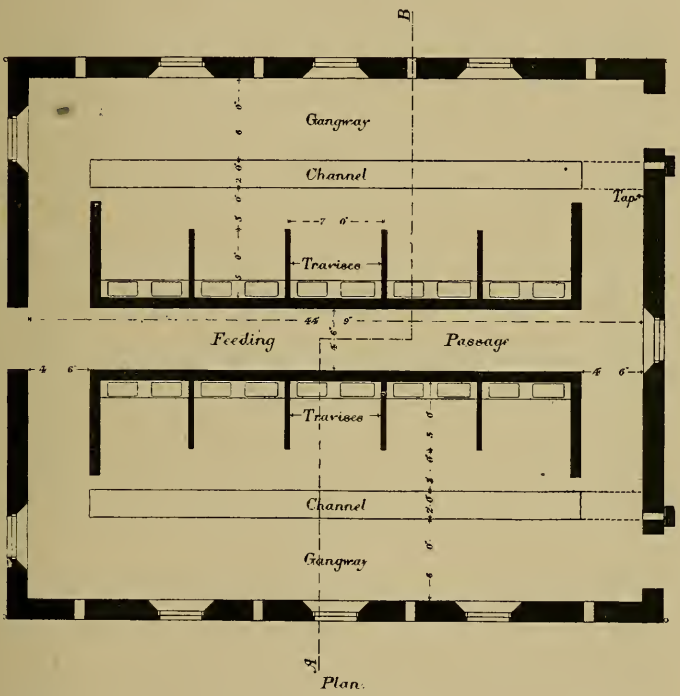


FIG. 2.—PLAN TO ILLUSTRATE SECOND TYPE OF COWSHED.
Note the commodiousness of the interior as opposed to the former and more common type.

the bars. A more expensive and elaborate system has been successfully employed, metal flaps hinged at the top being introduced. By lifting the flaps access to the troughs for filling purposes can be obtained (see Fig. 14). For simplicity of design and easy work the absence of any other obstruction than the feeding-troughs at the heads of the cows is by far the best principle to recommend.

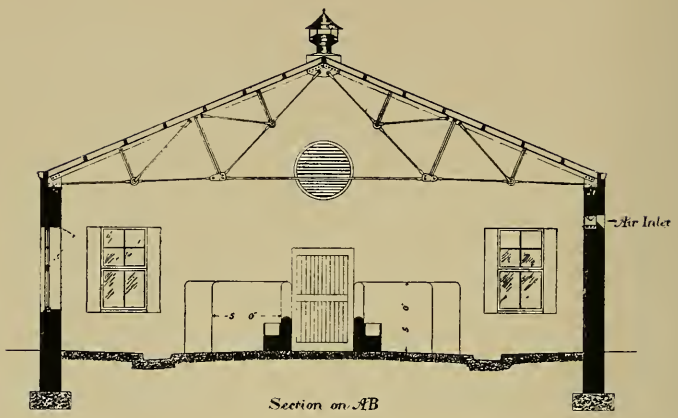


FIG. 3.

The section shows the beam-filling at the wall-head, as well as the position of air inlets on side walls, and the air outlets along the ridge, the outlets working on the Boyle system. Observe also the circular louvred opening on the end wall. This opening encourages ventilation. The large windows, made to open top and bottom, are also noteworthy.

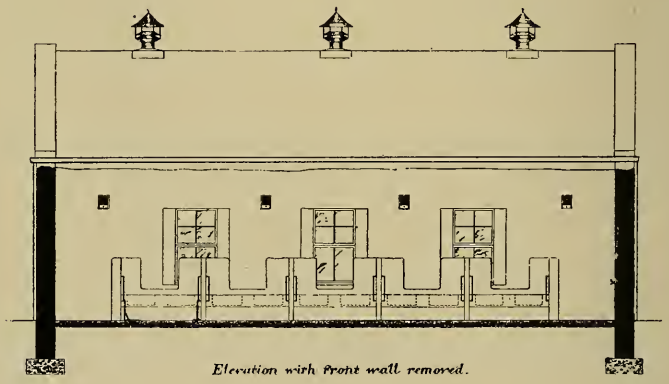


FIG. 4.

The removal of the wall enables one to study the arrangement of the stalls. It will be noted that obstructing walls at the cows' heads are reduced as far as possible. This arrangement of the parapet encourages the circulation of air about the animals' heads.

The third type of cowshed is better than either of the two former. In this type the feeding-passage is at the heads of the cows, the animals facing the side walls. The cows may face both walls, but in this plan the cost of erection is a matter for serious consideration. The feeding-passage at the head should in this case, as in the former, be not less than 4 feet broad. This style of building has everything to commend it. It favours good lighting and ventilation, is easily cleansed, and the enterprise which prompted its erection is a

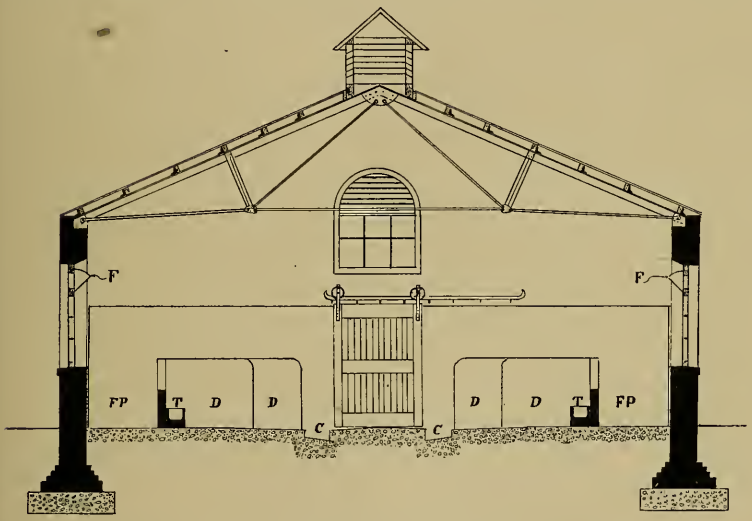


FIG. 5.—THIRD TYPE.

F, Fanlight opening inwards; D, division block; T, feeding-trough; FP, feeding-passage; C, manure channel or grip. The end window is, like those on the side walls, large, but in place of a fanlight has a louvred space provided.

guarantee that the health and cleanliness of the cows will be carefully guarded. It is needless to waste time in trying to dispel the objections offered to this form of byre by dairymen. The fact that in such byres cows thrive well and yield milk in plenty is sufficient answer to the sceptic (see Fig. 5).

The fourth style of cowshed is more commonly found in Sweden, Holland, and Germany than in this country. Those who favour

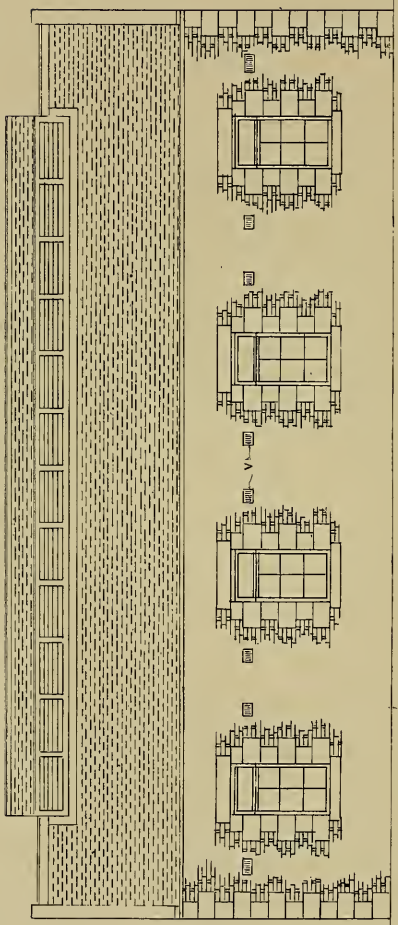


FIG. 6.—SIDE ELEVATION OF THIRD TYPE, SHOWING ARRANGEMENT OF CONTINUOUS LOUVRE ALONG THE RIDGE, AS WELL AS THE VENTILATORS IN THE WALL AND THE FANLIGHTS IN THE WINDOWS.

this type have no hesitation in preferring it to any other. It is of simple design, and inexpensive. The animals face one another across a central feeding-passage. There are neither obstructing partitions nor division blocks, the cows standing on short stalls, and tethered closely to their mangers. The stall is purposely short, because, when recumbent, the cow's buttocks hang over the edge of the manure channel. When the animal rises she can push forward her head, her movement being in no way impeded by obstruc-

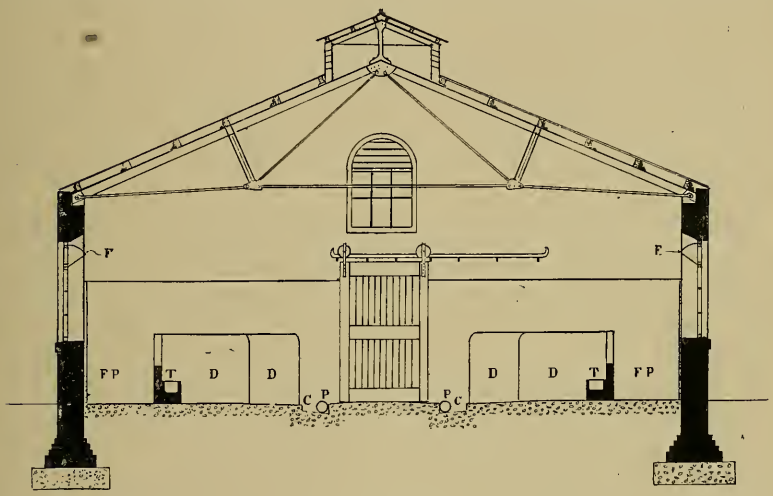


FIG. 7.—THIRD TYPE, WITH AN ALTERNATIVE ARRANGEMENT OF THE RIDGE LOUVRE.

Take note of the dip in the manure channel to one side. P, hole in wall for giving exit to manure channel.

tions ; but she is prevented from pressing too far forward by a designedly short halter, and cannot readily soil her bed (see Fig. 9).

Calves.—Attached to all cowsheds in connection with farm steadings there ought to be one or two small stalls for calves, arranged in the form of loose-boxes. In towns the dairyman seldom breeds his own stock. He prefers to buy newly-calved cows. In country districts, on the other hand, the farmer usually rears his own dairy cows. When, as sometimes happens, calf-boxes are placed inside

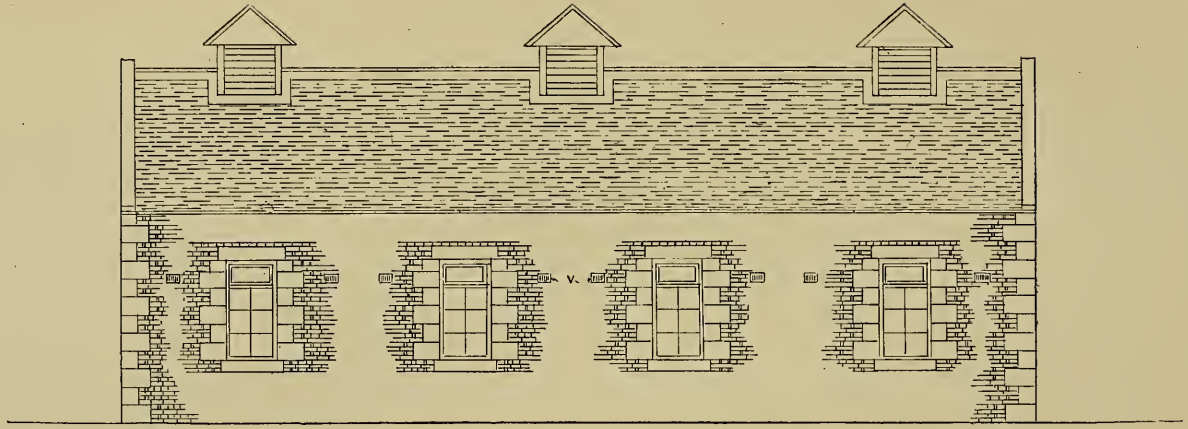


FIG. 8.—THIS FIGURE SHOWS THE ALTERNATIVE ARRANGEMENT OF THE RIDGE LOUVRE.

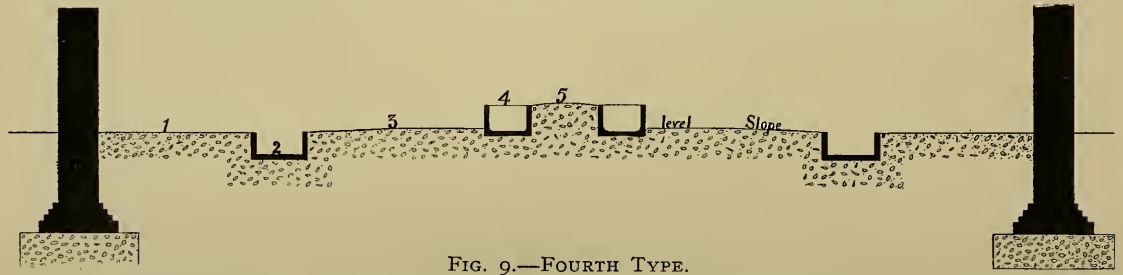


FIG. 9.—FOURTH TYPE.

1, Gangway behind cows; 2, manure channel (usually filled with straw); 3, platform or stall floor; 4, trough; 5, open space, no obstructing walls being built. No division blocks.

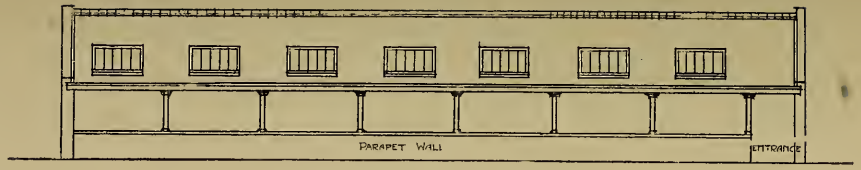


FIG. 10.—FRONT ELEVATION.

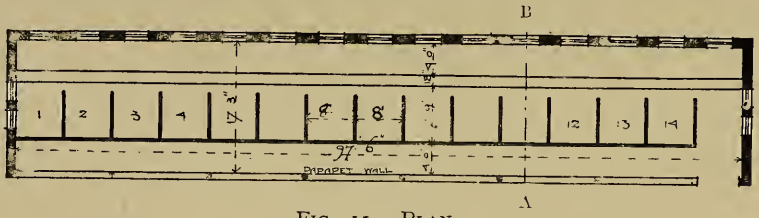
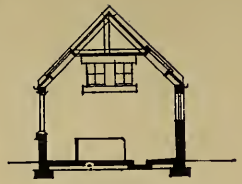


FIG. 11.—PLAN.

FIG. 12.—BACK ELEVATION.



SECTION AB.

SIDE ELEVATION.

This type is not one that will appeal to the cow-feeder. The front elevation shows a shed open in front. During winter the cows can be protected by closing up the front. Professor Wortley Axe has proved the absence of tuberculosis among cows housed in sheds of the type depicted.

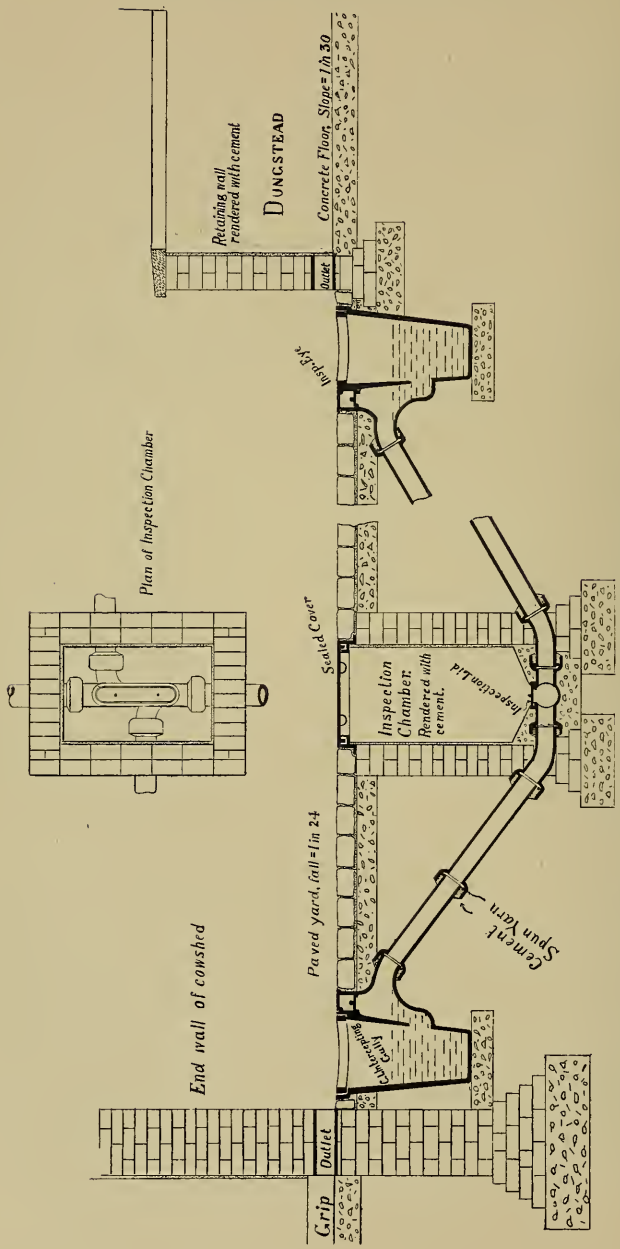


FIG. 13.—SHOWING ARRANGEMENT AND POSITION OF THE DRAINAGE SYSTEM CONNECTED WITH A MODERN AND WELL-CONSTRUCTED COWSHED.

cowsheds in dark corners, in order to hasten the fattening of calves, the practice ought to be condemned and stopped.

If the cowshed ought to be well lighted and ventilated, so must the calf-house. The bedding ought to be clean, and the young animals early inured to fresh air, a luxury too often withheld from the parent. When a calf-house is meditated in connection with a farm, the young animals should not be kept too near the mothers, whose milk production may be disturbed by the cries of their young. In connection with calves, it is right to emphasize the importance of preserving cowsheds in a cleanly and fresh state, since in the midst of filth, as can be readily understood, newly-calved cows readily develop septicæmia, which is analogous to puerperal fever in the human being. A few visits to the abattoirs will soon show how many cow carcasses are condemned on account of this very fatal disease. It is a lamentable fact that many cow-feeders in this country are, from a sanitary standpoint, unteachable.

The Housing of Fat Cattle.

Many cattle-feeders breed and keep animals with the sole object of fattening them for the butcher.

Highland cattle are often permitted to make the best of life in the open air, summer and winter, their shaggy coats protecting them from the rigours of our wintry climate. In summer these hardy-looking animals wander far over the hillsides, repairing in winter to low-lying ground, where their deficient natural feeding must be supplemented by turnips and hay.

Most stock-owners make ample provision for the housing of cattle in winter. In some instances the unfortunate brutes are huddled together in dark, ill-ventilated sheds under conditions too often encountered in connection with dairy-farms. The more enlightened stock-owner prefers a large yard, which may be covered over in part or in whole.

In the former case the shed forms a hollow square. Underneath this shed the fattening animals may shelter during inclement weather, feeding and drinking mangers being ranged round the walls. The open space in the centre of the court-yard is where the animals are permitted to roam about at their

own free-will. Unfortunately, the keeping of fat stock in this fashion is often made the opportunity to accumulate manure. It thus happens that in the course of some months the entire surface of the yard is covered over by manure to a depth of several feet. It can scarcely be contended that this is a sanitary procedure. In some instances the manure is removed once or twice every week.

When the animals are sheltered under completely roofed-in courts, they are usually fed from mangers replenished from passages running round the large pens.

Lastly, one may come across premises in which cattle are stalled in well-ventilated sheds fashioned on modern lines, with well-constructed walls and floors. The lighting is often poor, but it is intentionally so, since cattle are supposed to feed better and fatten more quickly in not over-bright interiors. Be that as it may, one need not be unduly concerned regarding the inadequacy of the ventilation, since the animals will only be confined in such sheds for comparatively short periods.

Piggeries and Pigsties.

Pigs should not be kept in towns, since, no matter how well constructed the sty may be, the pigs themselves readily provoke nuisance. The pig is not naturally a dirty creature, though it thrives under conditions that would be injurious to the health of any other animal. If the supervision of pigsties is not systematically practised, many complaints will reach the official regarding them.

No pigsty should be placed within 100 feet of a dwelling-house, and every effort ought to be made to relegate pig-keeping to the outskirts of populous districts. Not only is the smell from ill-kept piggeries very offensive, but the noise of the animals is now and again very disconcerting.

It is always wise to recommend the framing of by-laws which will in explicit terms indicate the lines that must be followed in the construction of pigsties, and also act as guides for the proper conduct of the business. Any departure from these by-laws may be followed by remonstrance or legal proceedings. It is easier to lay down a fair standard by means of by-laws than to seek to

create one with the aid of the appropriate sections of the Public Health Acts. In other words, by-laws are in themselves specific statutory enactments, a departure from which implies a breach of law. Without by-laws, which enter into details more fully than Acts of Parliament, the official will have to prove his case under the protection of a clause in the Public Health Act, which clause is not infrequently general in its terms, and not specific.

Pigs are housed in different ways. For instance, when a limited number of pigs is kept in connection with a farm or institution,

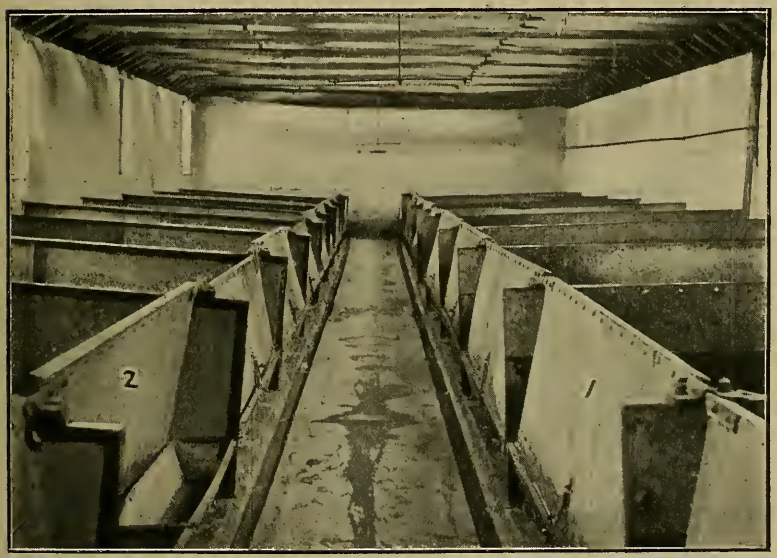


FIG. 14.—PIGGERY, SHOWING ARRANGEMENT OF METAL FLAPS FOR GIVING ACCESS TO FEEDING-TROUGHS.

1, Flap closed; 2, flap folded inwards, exposing feeding-trough.

such as an asylum or hydropathic, where surplus feeding-stuffs are abundant, the animals may be housed in sties of simple design. On the other hand, where pig-keeping is practised as an industry, the method of housing is much more elaborate (see Fig. 14).

In the former case a row of sties may be erected in a secluded part of the grounds to avoid the risk of nuisance and noise.

Each sty is divided into two parts; that in front is open, the rear portion being covered over by a sloping roof constructed of such impervious material as corrugated iron, slate, or stone slabs.

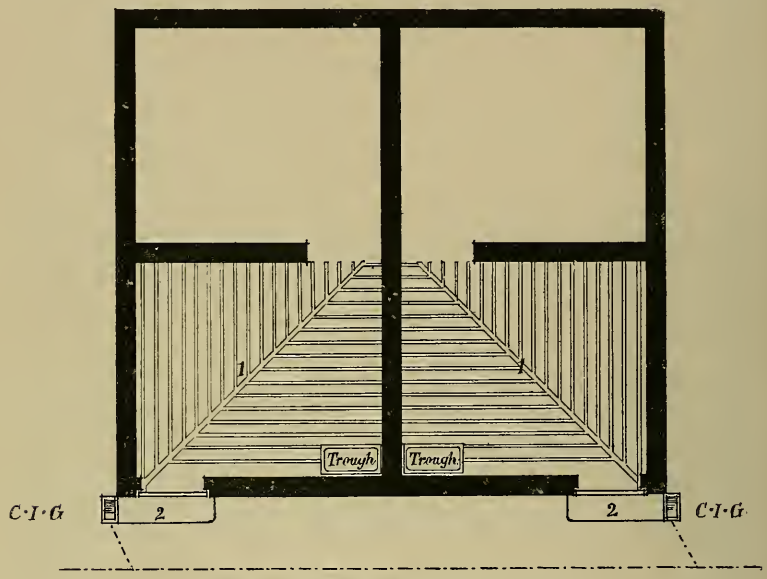
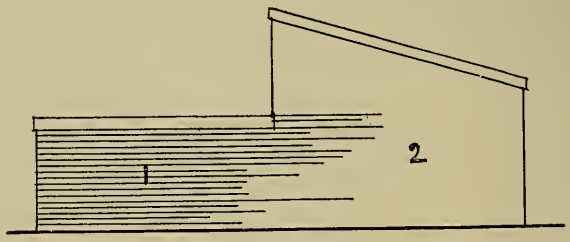


FIG. 15.—PLAN OF DOUBLE PIGSTY.

1, The ground-floor, the small channels in which lead liquids to the (2) cast-iron gully which communicates with sewer.



SIDE ELEVATION.

Shows the sloping roof of, (2) the covered-in portion, and the position of (1) the open portion.

In the front and open area the feeding-trough is placed, the closed-in part affording a bed and shelter for the pig (see Fig 15).

The floors of the open area must be sloped and laid with imper-

vious material, such as vitrified bricks or cement, and inclining towards the front of the sty in order to encourage the flow of liquids to the gully-trap placed outside, but close to the front wall of the sty. The walls of the sty must be substantially built of stone or brick, and their inner surfaces covered over with a layer of cement. Wooden walls and partitions not only harbour grease and filth, but

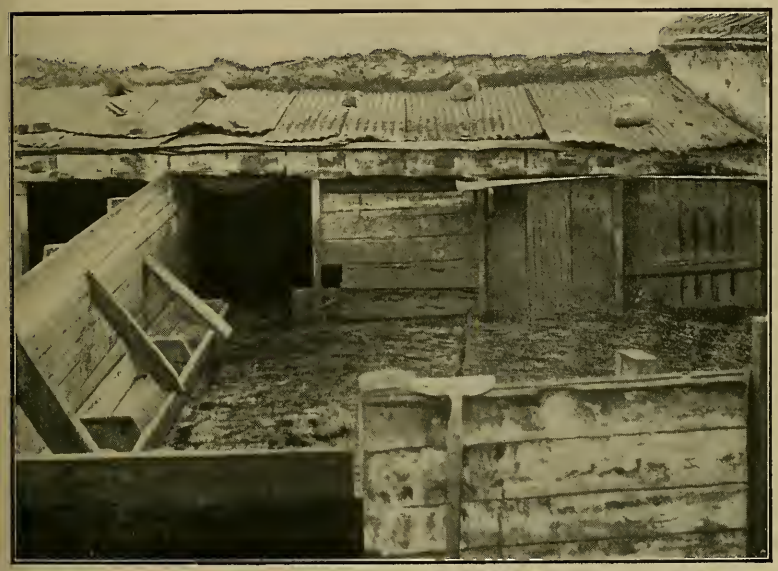


FIG. 16.—A PIGSTY CONDEMNED ON ACCOUNT OF ITS NON-COMPLIANCE WITH BY-LAWS.

Observe the large amount of woodwork, and the patchwork arrangement of the roof. The floor is rugged, and not constructed of impervious materials. To reconstruct such a sty it would be necessary to follow Fig. 15 as a guide: brick walls, rendered with cement, rain and wind proof roof, with concrete floor, and iron or stone-ware feeding-troughs, being demanded.

cannot withstand the destructive proclivities of the pig. For the same reason earthen floors are to be condemned. It is of the utmost moment that the pigsty should be kept scrupulously clean, and to make certain of this an adequate supply of water under pressure should be available for swilling-out purposes. The front wall may

with advantage be supplanted by a flap of sheet-iron, though in process of time this rusts unless its whole surface be periodically painted. The advantage of the swinging front is that the food may readily be emptied into the troughs without splashing it over the pigs and floors (Fig. 14).

In country districts the housing of pigs is often slipshod. Accordingly, strict attention on the part of the responsible official must be paid to obviate, especially, the risk of polluting potable waters. Though reiteration of the fact be made, it is well to repeat that the evil-smelling fluids coming from the sty must be conducted to a properly constructed cesspool or sound drainage system.

If pigsties are not systematically cleansed and limewashed the health of the animals will be affected. When swine fever attacks pigs housed in faultily-constructed sties it will be no easy task to prevent the recurrence of the devastating disease as soon as the restrictions of the Board of Agriculture are removed. Recurrence of swine fever (pig typhoid) is characteristic. Organically contaminated flooring, woodwork, and environment will undoubtedly play an important part in such recurrence. It is accordingly purely in his own interest that the pig-keeper should be urged to construct thoroughly sound pigsties. The loss entailed by an outbreak of pig typhoid is often very serious ; indeed, in consequence of recurring visitations, some pig-keepers have been compelled to relinquish the business.

In connection with creameries and breweries pigs are kept in large numbers because the by-products are abundant, and afford good material for fattening purposes. When pig-keeping is practised as an adjunct to the industries mentioned, great attention is paid to the sanitary housing of the animals, it being the aim to rear such stock as will bring credit to the establishment, and so create a ready demand.

As a rule, the pigs, when kept in large numbers, are housed in a spacious covered shed substantially built of stone or brick (see Fig. 14). The inside walls are made as smooth as possible, and the lighting is either by windows on the roof or side walls. The floors are covered over with cement. Ventilation is always efficient. Were it not so, the effluvia would be extremely offensive, and the health of the animals would be jeopardized. If the shed be of

sufficient breadth, there will be a passage down its centre, with sties on either side. The floor of each sty is so constructed that its rear half forms a platform, raised some inches above the level of the floor of the front section. On the raised part the pig rests and sleeps. In the front portion are the feeding-troughs. The floor of the rear portion is frequently laid with wood, in order to afford greater comfort to the animals; but wood is objectionable, being absorbent. Soft bedding laid over cement or vitrified brick is a better arrangement. As in the case of cowsheds, gully-traps must be placed outside the piggery building.

The subjoined set of by-laws illustrate the method of dealing with pig-keeping.

BURGH OF LEITH.

By-laws to regulate Pig-keeping.

1. *Construction of Pigsties.*—The walls and floor of every pigsty shall be constructed of durable material, and the surface of the walls and of the floor shall be rendered impervious to moisture. The floor shall not in any part be below the level of the adjoining ground, and shall be laid with a proper slope towards a suitable drain gully, of approved construction, placed outside the pigsty. A properly-constructed water-tight roof shall be provided for at least one-third of the area of the pigsty.

2. Every pigsty shall be provided, to the satisfaction of the local authority, with efficient drainage, and with proper means of disposing of all manure and other refuse arising from the keeping of swine, without creating a nuisance.

3. *Places where Pigsties may be Erected.*—A building shall not hereafter be constructed, or if not previously in use, or if disused as a pigsty, shall not hereafter be adapted or used as such, in connection with any slaughter-house, or within 100 feet of any house or dairy, or of a public road or street, except with the express consent of the local authority previously obtained in writing.

4. *Mode of Cleansing Pigsties.*—Every pigsty shall be thoroughly cleansed at least once a week, and oftener if required, so as to prevent such pigsty from becoming a nuisance. The whole of the inner surfaces of the walls and roof of every pigsty shall be thoroughly washed with hot limewash at least twice in each year, between the first and tenth days of each of the months of May and November.

5. *Penalty.*—Five pounds for first offence, and a further penalty of forty shillings for each day offence is continued after written notice has been sent by the local authority.

6. *Definition of 'House' and 'Dairy.'*—The former includes dwelling-houses, schools, factories, and other buildings in which persons are employed. 'Dairy' includes any farm, farmhouse, cowshed, milk-store, milk-shop, or other place from which milk is supplied, or in which milk is kept for purposes of sale.

Stables.

Though the keeping of horses does not often come within the purview of the sanitary official, it will be well to give a few leading points in connection with the stabling of horses. Too little attention is paid to the proper accommodation of these animals, though, on the whole, the provision of lighting and ventilation is more liberal than in the case of cowsheds.

The horse does not suffer from tuberculosis, most of his life being spent in the open air; but to maintain a horse in a good state of health his stable must be salubrious and well constructed. Each horse ought to be provided with 1,500 cubic feet of air-space, the average varying between 1,000 and 1,700 cubic feet. There ought to be abundant provision for lighting by means of windows in the roof and walls, the latter being made to open. During the day, when the horse is at work, all windows and doors should be thrown open.

Impervious walls and floors are as necessary in a stable as in a cowshed. For floors, the best materials are hard bricks carefully jointed and corrugated. Grooved cement also provides satisfactory flooring. In either case the floor should slope gradually to a shallow channel ultimately leading to a gully situated outside the stable. In private stables the inside walls are frequently lined with white enamelled bricks, the division blocks between the stalls being constructed of iron; other fittings being on an equally substantial scale. In stables the manger is placed breast-high. The water-supply should be pure and abundant, and the manure-pit constructed with impervious floors and sides, and situated some distance away from the stable itself.

In some instances one finds living-rooms for coachmen situated

immediately over the stables. This arrangement should only be permitted when the ceiling of the stable is made of concrete or other substantial material, in order to obviate vitiation of the atmosphere of living-rooms. Also access to dwelling-rooms above stables must be by outside stairs. Inside stairs only act as upcast shafts for foul air from the stable.

CHAPTER III

SOME FACTS CONCERNING MILK-SUPPLIES

The evil effects of frequent milk depletion, and unsatisfactory housing of cows—Requirements of the Local Government Regulations—Condition of cows—Cowshed interiors calling for remedy—Carelessness of milkers in handling milk—Diseases in udders and on teats causing illness—Sale of Milk Regulations, 1901—How the standard may be maintained—How the regulations are evaded—The taking of samples and the value of an appeal to the cow—How adulteration is practised.—The evil effects of preservatives—Cream separation—The guiding principles for securing pure milk supplies—Koch's pronouncement regarding the infectivity of cattle tuberculosis—The opposite view has now been established—The virulence of cow's milk infected with tubercle bacilli—Tubercle in the udder, its diagnosis and appearance—The bacterial contamination of milk purchased from six retail shops—The interpretation of the results—The Budde process of treating milk—Specific gravity of milk—Prejudice against chilled milk—The danger of drinking 'beastings'—Diseases spread by milk—Milk-shops—Registration and its anomalies.

ADDED to the debilitating influence exerted upon cows by the oppressive atmosphere of an ill-ventilated cowshed, one must not forget that systematic milk depletion will also have a deleterious effect upon the health of the animals. Just as a nursing mother becomes listless and anæmic under the continued strain of suckling, more especially if studied feeding and exercise are not indulged in, so must a cow sooner or later fall a prey to the tubercle bacilli ever ready to attack dairy animals of the purest breeds. It will be found wellnigh impossible to convince the average dairyman that the argument of the human being is applicable to the cow. The animal is looked upon as a machine, and treated as such. She is purchased with the expectation that she will yield between 2 and 3 gallons of milk every day. If she fails to perform her functions satisfactorily, she is hustled out and given over to the butcher.

It is surprising that at this period in the history of sanitary progress the milk traffic of Great Britain should be in the deplorable condition in which the practising health official finds it. Immense slaughter-houses are erected and lavishly staffed and equipped. Qualified men are appointed to inspect meat ere it reaches the consumer, and heavy fines punish the butcher or salesman who attempts to traffic in unsound food. Moreover, all meat is cooked before it is eaten. Yet a vital fluid which is known to be frequently collected under notoriously wretched conditions is controlled by regulations which it is optional for local authorities to adopt. Further, when regulations are adopted, their enforcement frequently borders upon the farcical.

A reference to the regulations drafted by the Local Government Board shows conclusively that adequate light and ventilation must be provided in all cowsheds, the interiors of which must be constructed of impervious materials; and, lastly, that every precaution must be adopted to protect the health of the stalled animals. In addition, special provisions are laid down to prevent contamination of the milk in the cowshed as well as in the milk-shop. Despite these specific requirements, one comes across dark, stuffy cowsheds devoid of ventilation. Ceilings may be overhung with cobwebs, existing windows having their glass panes obscured by filth. The floors of the building may be uneven and sodden with dirt. The walls, which may be constructed of wood, are bespattered with filth, as also are the rickety division blocks. The flanks, tails, and udders of the cows exhibit accumulations of adhering manure, and the resting-places of the animals are often devoid of clean bedding.

Milking operations are often conducted without the slightest attempt at preventing contamination. The milker rubs his head and shoulders against the cow's flanks, with the result that the milking-pail receives its quota of débris, the whisking of the cow's tail against her unclean sides doing further mischief. The milkers spit on their fingers to moisten them before commencing operations. They blow their noses between their fingers. They wash their soiled fingers with the first (fore) milk drawn from the udders, and spit chewed tobacco on every side of them. If a cow develops inflammatory mischief in part of her udder, and pus or blood is

seen issuing from a teat, a piece of string is tied round the teat to keep back the flow of milk. An eruption of cow-pox is not viewed with any seriousness by the milker. His hands may be infected, but with rags tied round his fingers he continues to ply his calling. It is only when a health official visits the cowshed, and detects the diseased condition, that the affected animals and their milkers are isolated and kept under strict observation. Several

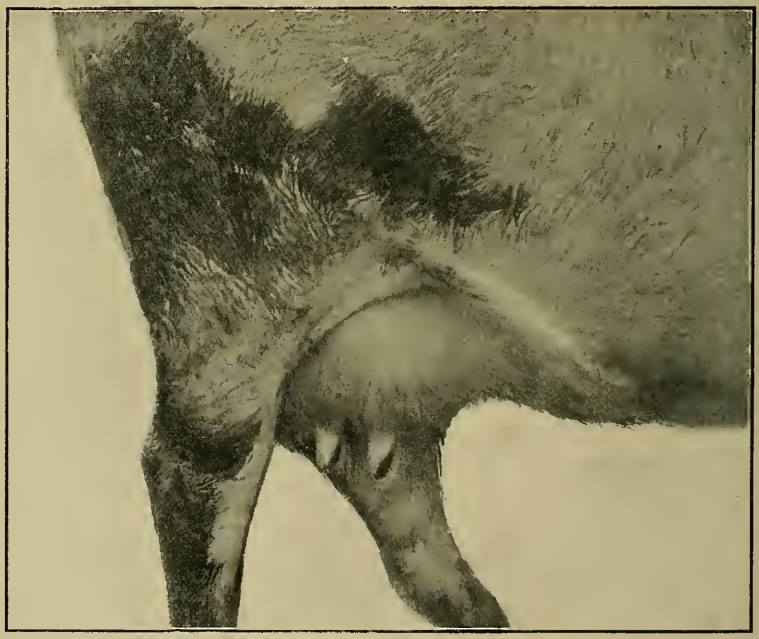


FIG. 17.—SHOWING ULCERS ON COW'S TEATS.

Milk drawn from several cows so suffering was the means of diffusing the infection of diphtheritic sore throat.

instances have been recorded where epidemic sore throats could only be attributed to the drinking of milk drawn from teats and udders affected by cow-pox. Dr. Chalmers, Medical Officer of Health, Glasgow, dealt with such an outbreak which occurred at Belvedere Fever Hospital. The author also related his experiences regarding an outbreak of diphtheritic sore throats due to drinking

milk taken from cows suffering from cow-pox. Both contributions appeared in *Public Health*, September, 1904, and January, 1905. In the latter case it was actually found necessary to station relays of inspectors at the cowshed at milking times to prevent the sale of milk from the diseased animals.

Taking these facts into serious consideration, one cannot refrain from expressing surprise that a fluid which is capable of spreading enteric, scarlet fever, and diphtheria, continues to be so carelessly collected, stored, and distributed. If inaction on the part of responsible authorities enables the slovenly dairyman to continue the even tenour of his way, legislation may truthfully be said to provide a poor stimulus.

It is freely admitted that individual cows now and again yield milk that falls below a certain standard. But the concensus of expert opinion persuaded a Departmental Committee that an all-round standard for genuine milk could be laid down, such a standard being ultimately fixed as follows :

Sale of Milk Regulations, 1901.

The Board of Agriculture, in exercise of the powers conferred upon them by Section 4 of the Sale of Food and Drugs Act, 1899, have issued the following regulations :

Milk.

1. Where a sample of milk (not being sold as skimmed, or separated, or condensed milk) contains less than 3 per cent. of milk-fat, it shall be presumed, for the purposes of the Sale of Food and Drugs Acts, 1875–1899, until the contrary is proved, that the milk is not genuine, by reason of the abstraction therefrom of milk-fat or the addition thereto of water.

2. Where a sample of milk (not being milk sold as skimmed, or separated, or condensed milk) contains less than 8·5 per cent. of milk-solids other than milk-fat, it shall be presumed, for the purposes of the Sale of Food and Drugs Acts, 1875-1899, until the contrary is proved, that the milk is not genuine, by reason of the abstraction therefrom of milk-solids other than milk-fat, or the addition thereto of water.

Skimmed or Separated Milk.

3. Where a sample of skimmed or separated milk (not being condensed milk) contains less than 9 per cent. of milk-solids, it shall be presumed, for the purposes of the Sale of Food and

Drugs Acts, 1875-1899, until the contrary is proved, that the milk is not genuine, by reason of the abstraction therefrom of milk-solids other than milk-fat, or the addition thereto of water.

To secure genuine milk the cows must not only be well fed, but *properly* and *regularly* milked. Irregular and imperfect milk depletion will certainly lead to aberrations from the standard.

It will be noticed that the qualification 'until the contrary is proved' has been added. This proviso has, in some districts, utterly nullified the intended effect of the milk standard. To give an oft-experienced instance in the East of Scotland, let the following be taken as a practical illustration. An inspector takes four samples of milk from four different shops. One sample is found to be below the standard, the other three being genuine. All samples are taken within half an hour of one another, and in the same locality. The person selling the presumably adulterated milk is taken to court. He brings with him several witnesses, each of whom swears on oath that nothing was done to tamper with the milk after it left the cow. The prosecuting side prove from the analyst's certificate that the milk is, let it be said, deficient in fat to the extent of 15 per cent. Cross-examination brings the admission that *individual* cows do now and again yield poor milk. Added to that, it is adduced for the defence that on that particular day on which the sample was taken one or two cows were ailing, that an east wind was blowing, and that the turnips were frosted. In fact, circumstances favoured the yielding of poor milk. The prosecuting side thus find themselves outwitted by mere platitudes uttered in extenuation of the defective milk. A short summing-up follows, and the judge repeats his familiar verdict of 'Not guilty' or 'Not proven.' Thus the farce has continued for several years, and the adulterator continues to ply his art—for it is a fine art in the milk trade. In Scotland many decisions regarding milk that falls below the standard have often been notoriously unsatisfactory, the consumer who pays full prices in the belief that he is buying genuine milk being made to suffer.

When milk is sampled from the shop of a person who also keeps cows—in contradistinction to the middleman with the small shop—an appeal may be made to the cow. That is to say, a sample taken from the dairyman's cart or shop may after analysis be found to be

of poor quality. If proof of adulteration be required, a sample may be taken at the cowshed and direct from the cow. But one must be warned that only a fair sample is to be accepted, not a sample of 'fore' milk, which is known to be deficient in fat. Also the samples taken on different days, in the one case from the milkman, and in the other from the cow, do not furnish a reliable test. To be of value the appeal to the cow must be taken from the same milking as that which provided the sample procured at the shop.

In England the Court of Appeal decided by a majority that cows, when properly tended and fed, must be expected to yield milk that would comply with the standard laid down by the Board of Agriculture.

It is often asserted that the milk trade is not only irksome, but unremunerative. One has to look carefully round in search of proofs for such statements. That milk-farmers in some parts of the country sell milk in immense quantities at very low prices is true. Their work is admittedly arduous and exacting, since the market for milk, distant many miles by rail, must be regularly supplied in summer and winter. That this task is no light one during the stress of a severe winter no one can deny. The farmer is only occasionally found guilty of adulteration. He may, during the warmer months, foolishly add preservatives when harmless and much simpler means are at his command. As has been said, the milk as it reaches the railway-station is usually of good quality. When, however, the milk reaches the middleman, fraud begins. Not content with buying milk at prices ranging from 6d. to 9d. per gallon, and selling it to the public at 1s. 2d. to 1s. 4d., he must, in order to eke out his supply, add water or skimmed milk. Milk-dealers in towns do not conceal the fact that they can judge to a nicety how much water or skimmed milk may be added to the supply after it comes from the farm. When, however, they appear as witnesses in their own defence, their assertions of innocence are astonishing. Besides reporting upon milk samples submitted to him, the analyst—whom it is necessary for every local authority to appoint—will examine for the presence of preservatives. The substances most commonly employed and encountered are formaldehyde, borax or boric acid, saltpetre and bicarbonate of soda; salicylic acid and fluorides being less frequently used.

One of the chief dangers underlying the addition of preservatives is the fact that with each change of retailer—from the farmer to the proprietor of the milkshop—a fresh dose of preservative may be added. Preservatives may retard the onset of the souring process, but other injurious fermentative organisms and the *Bacillus coli communis* are given the opportunity to multiply and work serious mischief when the milk is drunk. The addition of preservatives is the cloak for laziness at the farm or uncleanliness at the milkshop. If cows be well-groomed, the milker's hands kept clean, and milk utensils thoroughly washed, there need be little anxiety regarding the keeping qualities of milk. More especially will this hold true if all milk, after coming from the cow, be passed through a good filter, and subsequently passed over a chilling apparatus. To follow these details means the expenditure of trouble and time. The consequence is that during the summer weather milk coming into towns turns quickly sour, and to guard against this contingency either the farmer or the shopkeeper, or both, resort to the addition of preservatives. It will only be when the addition of preservatives is made penal that the farmer and milk-dealer will be forced to turn their attention to methods of cleanliness.

It may be stated at this point that, while no legal enactment has been put into force, the recommendation has been made that preservatives may, to a small extent, be permitted in cream. At the various creameries throughout the country cream is separated from milk by centrifugalization. To effectively separate cream from milk the latter ought to be warm, heat being artificially imparted to the milk. When the separator is in close proximity to a cowshed, the milk taken from the cow is sufficiently warm for the purpose desired. After the cream has been separated from the milk, it is put into jars, commonly seen on provision dealers' shelves. As has been said, a small amount of preservative—usually boric acid—is permissible in order to permit the jar cream to remain sweet for some time during even the warmest weather. In the recommendations referred to it is stipulated that a label shall clearly state that a preservative has been added to the cream in order to warn the consumer. With these facts in one's mind it might be well to summarize the points that should be attended to in order to secure a satisfactory milk-supply.

1. The rigorous enforcement of regulations, in order to establish sanitary and well-designed cowsheds. Under this heading drainage and water-supply fall to be considered.

2. A systematic inspection of all dairy cows, so that they may be maintained in a state of scrupulous cleanliness, and in order to detect disease among them.

3. Where possible, the enforcement of the principle that dairy cows shall be confined to the cowshed only during the winter months and, during summer, only at milking-times.

4. That the milkers' hands are washed with soap and water before each milking, and that between the milking of every animal the hands are dipped in clean water, and then dried with clean towels. This necessitates the provision of basins and water-taps inside all cowsheds.

5. That the animals must be provided with good bedding, and the workers with clean overalls. That the food of the animals must be carefully chosen.

6. That the milk will be drawn into an efficient filter placed over a clean milking-pail, the filter acting as a well-fitting lid to the pail. Not only will the filter protect the milk from grosser contamination, but it will arrest finer particles.

7. That no milk shall be permitted to stand in pails inside the cowshed.

8. That immediately after removing the milk from the cowshed it must be again filtered, and passed over a chiller into clean receptacles. Through the coils of the chiller either cold water or brine may be circulated (see Fig. 19).

9. That the milk-store must be of good construction, with clean shelves and impervious surfaces, and neither directly communicating with the cowshed nor with dwelling-rooms. Its proximity to dung-pits must be guarded against.

10. All milk sold to private consumers must be dispensed in stoppered glass bottles.

That the foregoing methods can be put into practical operation has already been proved. When a milk-supply from unimpeachable sources is assured the consumer will have no need to consider the advisability of boiling milk as a safeguard. The regular inspection of dairy cows will ensure that tuberculosis of the udder will immedi-

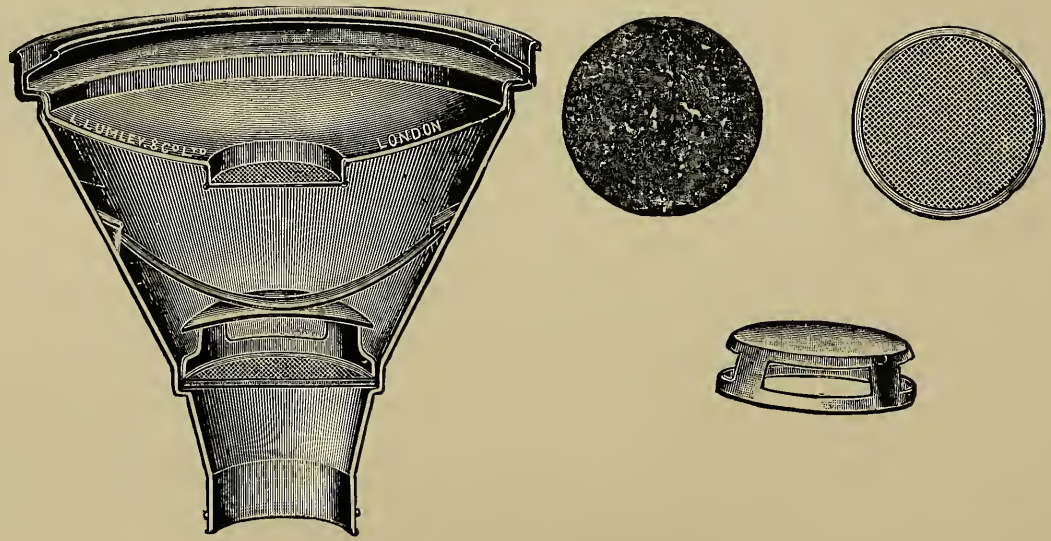


FIG. 18.—COMPONENT PARTS OF 'ULAX' FILTER.

Milk is required to pass first through wire gauze, then through two discs of wire gauze between which is laid a circular sheet of fine cotton. The cotton must be frequently renewed, since it rapidly becomes clogged with arrested impurities.

ately be detected, and affected cows prevented from supplying milk for human consumption. The universal adoption of the tuberculin test cannot yet be reasonably expected until serious and general effort is made to prevent the occurrence of tuberculosis among dairy cows. How that may be brought about has already been indicated.

Professor Koch some years ago startled the world by announcing that human beings could not be infected by the tubercle bacillus emanating from cattle, and conversely, that he had been unable to infect cattle with bacilli taken from the human being. This strange

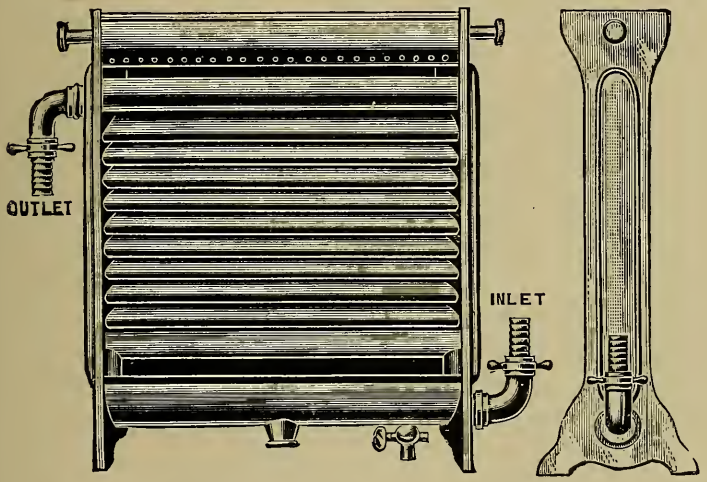


FIG. 19.—A SIMPLE FORM OF MILK-CHILLER, SHOWING FRONT AND SIDE VIEWS.

Cold water or brine passes into the inlet by a suitable connection of piping, and after the fluid has filled the body of the chiller, from below upwards, an outlet is provided. There is thus a constant circulation of cooling fluid going on. The milk to be chilled is poured over the ribbed coils of the chiller, and is collected in a suitable vessel. The milk is chilled, in fact, by coming in contact with artificially-cooled metal surfaces.

and unexpected opinion did not long pass unchallenged, and already Professor Hamilton, of Aberdeen, has proved that Koch's theory is wrong. In fact, some of Koch's results are taken as the best means for controverting his observation that the bovine and human tubercle bacilli are different species, and it is frankly asserted that

the changes in the glands of the animals experimented on by Koch would, in the hands of any other than a biassed observer, have been taken to demonstrate undoubted infection by tuberculosis. Koch's prejudiced views would not permit him to look upon the changes as being due to infection by the human tubercle bacilli.

FIG. 20.—A MILK-CAN WHICH HAS A SELF-SEALING ARRANGEMENT ATTACHED TO IT, THEREBY PREVENTING TAMPERING WITH THE CONTENTS.

The double lid affords security against contamination.

Koch founded his startling doctrine upon the following experiments: Thirty-four animals were inoculated with tubercle bacilli taken from human beings, and twenty-one animals with bacilli from bovine tuberculosis. The latter all developed the disease in a grave form. The animals inoculated with human bacilli gave in

thirty cases negative results, and in four the results were doubtful. Arloing severely criticized Koch's report, and had no hesitation in affirming that three more animals would, in the hands of any other than a prejudiced observer, have been held to have been infected. In support of his contention Arloing cites examples. For instance, the following is quoted by Koch to indicate a doubtful result : An animal was allowed to inhale tubercle (human) bacilli. At the end of the first month the animal began to cough, and continued to do so until death took place. The post-mortem examination revealed ' some clustered and encapsuled tubercular collections in the right lung the size of a pea.' Microscopical examination showed ' the presence of human tubercle bacilli in the diseased part of the lung,' whilst ' guinea-pigs inoculated with the diseased portions of lung-tissue developed general tuberculosis.' Professor Hamilton truly says in his own report : ' It is hard to see what further proof was required of the animal having developed pulmonary tuberculosis during the time it was under observation.' It is well to note that Ravenel, De Jong, Delépine, Behring, Hamilton, and others support Arloing in contradicting Koch's pronouncement. Arloing holds that the human tubercle bacillus manifests less activity in certain animals than do the bacilli of bovine disease, but that human and animal tuberculosis cannot be subdivided from one another. In summing up his experimental results, Professor Hamilton concludes with the following striking sentence : ' Our results are a direct contradiction of those alleged to have been obtained by Koch and Schütz.'

The second Royal Commission on Tuberculosis has issued a preliminary report which also contradicts Koch's pronouncement.

The need for frequent veterinary examination of dairy stock is borne out by the fact that tuberculous deposits in the udder are of rapid growth, and have been found to exist in 10 per cent. of dairy cows. To differentiate between tuberculous and non-tuberculous deposits in the udder one must have recourse to bacteriological examination of milk (strippings) drawn from the affected quarter. Such milk, if infected, is peculiarly virulent when injected into guinea-pigs. It is necessary to bear in mind that tuberculosis in the udder is not so readily discovered as the nature of the disease would suggest. In the course of an investigation in

Aberdeen, Mr. Young makes reference to a cow in whose udder tuberculous lesions existed, yet manipulation had failed to detect any abnormality (see Fig. 21).

Before concluding this section it may be of interest to quote

FIG. 21.—SHOWING LARGE MASS OF TUBERCULOUS GROWTH IN A COW'S UDDER.

When cut into by a knife the mass was gritty and rough, as if one were cutting into a turnip.

the results of investigations made by the author regarding milk sold from six different dairy shops in Leith. The samples were taken during the month of August, when bacterial contamination

was expected to be at its worst, mid-day milk being asked for on each occasion. About six hours after milking the milk was subjected to a bacteriological examination at the hands of my assistant, Dr. Mair, now of Victoria University, Manchester, the following being the results :

Sample	1	contained	39,000	bacteria	per c.c.
,,	2	,,	81,000	,,	,,
,,	3	,,	89,000	,,	,,
,,	4	,,	168,000	,,	,,
,,	5	,,	400,000	,,	,,
,,	6	,,	15,000	,,	,,

The good result obtained from the last sample suggested an examination for preservatives, but none were found. The shop from which the milk was sold differed from the other five in that the cowshed was close to the shop. The milk, therefore, had not any great distance to travel, and was handled by few people.

Samples of milk were next drawn direct from the cow into sterile dishes. In the first place, ' fore ' milk was drawn without preliminary treatment of udders, teats, or milkers' hands. One specimen of milk was kept in a cool room, and examined six hours after milking, 1,000 bacteria per c.c. being found. Another portion, also kept in the cool room, was surrounded with ice. At the end of six hours, examination of this sample showed only 400 bacteria per c.c. The point of practical interest in this comparative test is the powerful inhibitory influence upon bacterial proliferation exerted by chilling.

Samples of after-milk taken from the same teats were treated in a similar manner to the foregoing. That portion kept in a cool room, when examined after the expiry of six hours, revealed 270 bacteria per c.c. ; the other, surrounded by ice, showed only 130 bacteria per c.c. The latter result, whilst still proving the influence of chilling, also demonstrates the fact that ' fore ' milk is more prone to contamination by bacteria which are capable of entering the teats from outside. From these results it is manifest that the first few draws of ' fore ' milk should be rejected. It has already been stated that the milk was collected in sterile vessels. One can scarcely expect, however, to find sterile milk-pails in actual practice ; but the fact must not be allowed to escape attention, since

cleanliness of all pails and dishes will exert a powerful influence for good. To conclude the research the following experiment was carried out. After the cows had been milked the filled pail from the cowshed was emptied into a big can, but before reaching this can the milk was passed through that type of filter used by most dairymen. Such filters, consisting of wire gauze, are capable of arresting only coarser impurities such as hairs, straws, and manure. A sample from the milk passed through the filter was divided into two sterile bottles. One bottle was surrounded by ice, and at the end of six hours 39,000 bacteria per c.c. were found in the milk. The sample not artificially cooled yielded 170,000 bacteria per c.c.

By tracing the milk in this way step by step one can readily appreciate where pollution takes place. Obviously, if milk could be produced under what might be properly termed aseptic conditions, bacterial contamination would be reduced to a minimum. Already mechanical milking-machines have been put upon the market, and by using these one may reasonably expect to secure milk of great purity, provided, however, that subsequent handling of the fluid is conducted with every care. That unclean filters and imperfectly-washed pails do add their quota of pollution has been proved by the experiments just detailed.

As a guide to the student, it is well to add that in the city of Rochester, U.S.A., a very perfect system of milk-supply has been instituted. Milk is sent out from the farm in bottles surrounded by broken ice, and if no more than 12,000 bacteria per c.c. are found, the milk is reckoned to be of good quality. In New York only chilled milk is allowed to be sold.

A striking commentary upon the unsatisfactory condition of the milk traffic of this country is provided by the introduction from Denmark of the Budde process. The author has had some practical experience with Buddeized milk, and, judging from the results of experiments made by him, it should establish an effective barrier against the sale of infected or polluted milk. To safeguard the consumer, he is frequently advised to boil all milk before drinking it. Boiled milk is unpalatable, and many authorities believe it to be lacking in nutritive properties. Pasteurized milk is free from disagreeable taste, but one cannot always be certain that it has been properly treated. Moreover, it has attached to it the risk of overcooking,

with the possible impoverishment of the liquid. The Budde process aims at providing a milk collected under strict care from picked farms, and treated with such quantities of hydrogen peroxide as will destroy pathogenic organisms. Briefly put, the following is the routine followed. Milk is treated in bulk in a jacketed vessel. While in this vessel the milk, kept in constant motion, receives adequate quantities of peroxide of hydrogen, the temperature of the mixture being brought up to 120° F. The milk is then poured into stoppered bottles, which are immersed in a water-bath. Means have been devised for getting rid of the excess of peroxide, the taste of the milk being but slightly altered; in fact, one might say its flavour is improved.

Objections may be taken to this system on the ground that a chemical substance has been used. But the addition of peroxide cannot be compared with the maladroit use of boric acid, formaldehyde, and other substances. The former is not clandestinely added; moreover, it is carefully eliminated before being sent to the consumer. It is also an essential to the success of the Budde process that the treated milk must have been recently drawn from the cow. Dairymen add preservatives to cloak the imperfections of old milk.

That all traces of peroxide are removed has been proved to the author's satisfaction. The destruction of the micro-organisms of enteric, diphtheria, tuberculosis, and of the *Bacillus coli communis* intentionally added to milk has also been proved by the use of peroxide in such quantities as are necessary in treating milk by the Budde process. Milk so treated can be sold as cheaply as ordinary shop milk. Its advantages over milk usually supplied must be obvious.

Milk is of a yellowish colour, but this varies among certain breeds of cows and with the use of different food-stuffs. Many milk-dealers add a harmless vegetable colouring substance known as 'annatto' in order to give the milk a rich yellow appearance. This dye is also added to butter and cheese. The specific gravity of milk varies between 1026 and 1036. Cream rises on milk between the fourth and eighth hours after milking. When milk has been chilled after leaving the cow the rising of cream is delayed. This fact has always been found to stand in the way of persuading the poorer classes to buy chilled milk. The knowledge that they can

secure warm milk satisfies them that it must have been recently drawn from the cow. Cold milk also creates the suspicion that old milk has been supplied. Further, the delayed rising of the cream on artificially-chilled milk suggests milk of poor quality. Such prejudice only indicates how much the campaign of education must be pushed by the health official.

' Fore ' milk, as has been said, is deficient in fat as compared with the rich ' strippings.' It is the last of the ' strippings ' which must be collected and examined when search is to be made for tubercle bacilli. ' Colostrum ' or ' beastings ' should never be sold for human food. This milk, coming from newly-calved cows, is thick, clots quickly, is yellow in colour, has a peculiar odour, and a specific gravity of about 1050. When infants drink ' beastings ' they frequently suffer from indigestion, griping, and diarrhœa. A fortnight at least after calving should elapse before milk is supplied to the public. The fact that newly-calved cows are rich in milk leads to their being much sought after by dairymen.

It is fortunate that dairy cows affected by anthrax have their milk secretion arrested. This practically obviates all risk to the consumer when this fatal disease breaks out in a herd. When foot-and-mouth disease (epizootic aphtha) manifests itself, the pustules, by appearing on the udders and teats, render the milk of affected animals dangerous to human beings. Infection of human beings has been repeatedly traced to cows ailing with this disease. Accordingly, no milk from diseased animals ought to be sold. The danger of tuberculosis in the udder has already been fully detailed. ' Weeds ' in the udder, or ' garget of the maw,' are other names for acute mastitis. If this condition is not immediately treated by vigorous milk depletion and suitable applications, permanent mischief as a result of abscess-formation may ensue. Should abscesses develop, the pus drawn will render milk unsafe as a food. The risk attaching to the sale of milk from cows attacked by cow-pox has already been commented upon.

As is well known, epidemics of typhoid and scarlet fever and diphtheria have been frequently traced to infected milk. These diseases may be spread by infected persons employed in handling the milk, and in the case of enteric fever, by specifically polluted water used to clean milking utensils.

Milk-shops.

If milk must be carefully treated in the cowshed, it ought also to be carefully protected when it reaches the shop-keeper. The regulations already referred to lay down conditions that should

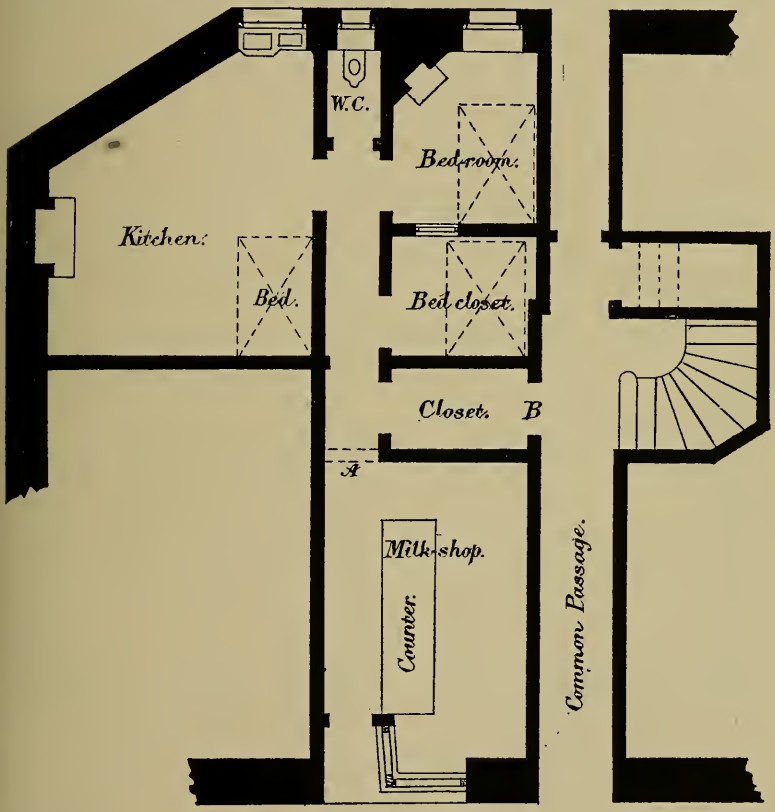


FIG. 22.

At A was a communication between the dwelling-house and milk-shop. This communication was blocked up, and the only means of passing from the house to the shop became through B, along the common passage to the street.

be observed in connection with milk-shops. The faults most frequently detected are in the methods of storing milk in open and

uncovered dishes, and the retailing of milk in unsuitable premises. They may be unsuitable because potatoes, cabbages, onions, capable of giving off dust and effluvia, are stored and handled by the milk-

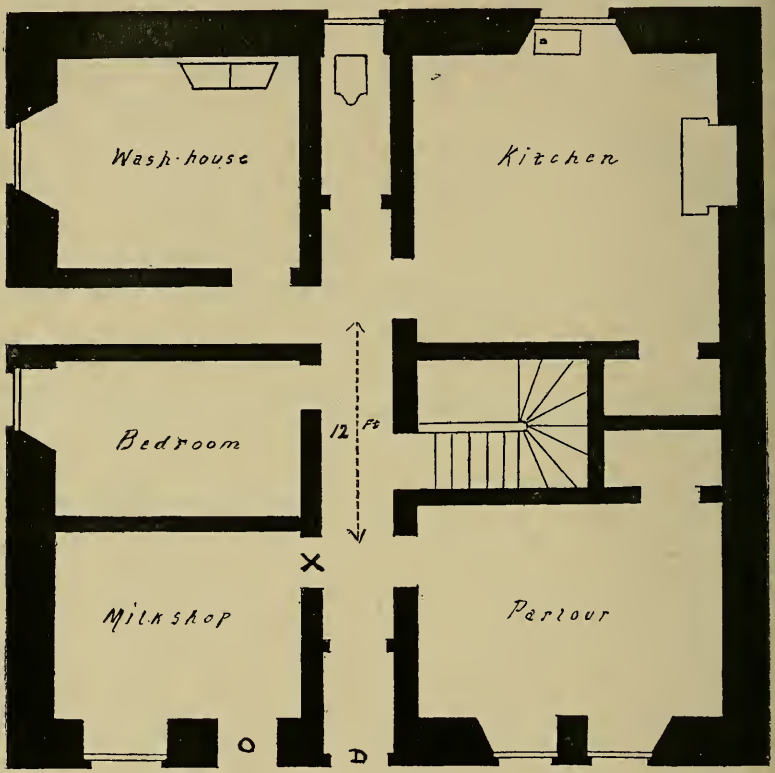


FIG. 23.

O is the entrance to the milk-shop from the street for customers. D is the entrance to the dairyman's dwelling-house. X was a doorway for the convenience of the dairyman, giving him ready access to the milk-shop. This permitted free communication with living-rooms. At X access is now no longer possible, the dairyman being required to pass through D to enter at O.

vendor. Also, the living-rooms may, and frequently do, communicate directly with the milk-shop (Figs. 22, 23).

The internal fittings of all milk-shops should be kept scrupu-

lously clean and free from dust. Mangling of clothes must on no account be permitted, and the entrance to the dwelling-rooms, if such be attached, should be quite separate from that leading to the milk-shop. Such articles as butter, eggs, bread, and sweets may safely be sold, but general groceries should not be allowed.

Unless the receptacles containing the milk be protected by gauze covers, much dust and débris will find its way into the milk. The adoption of such a precautionary step would prevent a vast amount of milk pollution, though the serving out of small quantities of milk by frequent dipping tends to upset any good efforts to prevent contamination.

A very ludicrous anomaly exists with regard to the licensing of milk-vendors. A person cannot be refused a license to sell milk. It is only after he begins to use what may prove to be an unsuitable shop that he can be interfered with. The obvious legislative flaw here is the lack of power to license the shop itself.

CHAPTER IV

TUBERCULIN AND MALLEIN TESTS—PREPARATION OF VACCINE LYMPH

Composition, and method of making tuberculin—Its value as a diagnostic—Why it may give unsatisfactory results—Experiments on animals with tuberculin—The dose of tuberculin and the characteristic rise in temperature expected—'Salting' of animals—Mallein and its composition—Its value and how it is to be used—The reaction in glandered horses—Vaccine lymph, how prepared and collected.

Tuberculin owes its origin to Koch, who, in 1890, announced his belief that he had discovered a cure for tuberculous affections. In the course of time, however, the hopes of many were shattered, and tuberculin as a curative agent fell into disrepute.

Tuberculin consists of 'a glycerine bouillon culture of tubercle, in which the bacilli have been killed by heat, and which had been concentrated by evaporation. It thus contains the dead and often macerated bacilli, the substances indestructible by boiling which existed in these bacilli, non-volatile products formed by them from the food material when alive, and the concentrated remains of the bouillon and glycerine' (Muir and Ritchie). This form of tuberculin is now chiefly relied upon as a diagnostic in cattle. Few cattle-owners or rearers of stock have much faith in the virtues of tuberculin. It is frequently not to their interest to credit its capabilities for weeding out tuberculous animals. That tuberculin occasionally fails to yield satisfactory results is true. It is these occasional failures which prompt the sceptic to level wholesale condemnation at the tuberculin test.

One can quite readily understand that tuberculin of inferior quality or lacking in potency on account of age may, and does, give contradictory results. Few have, in this country, given the subject

much study. Their inability to perform the test adds strength to that statement. Those who have experimented with tuberculin in a systematic and careful way have no hesitation in affirming their faith in its value as a diagnostic. Professor Bang of Copenhagen has shown from post-mortem results that in 280 animals tested, error only occurred in 3·3 per cent. In this country such men as Professors McFadyean and Wortley Axe believe in the efficacy of tuberculin. One would imagine that their experiences were more worthy of credence than those of such interested parties as cattle-breeders.

In the choice of cattle for breeding purposes, their freedom from tuberculosis is a most important consideration. Tuberculin is the most reliable test in such cases. The dose and quality of tuberculin injected must be ample and reliable, and the subsequent taking of temperatures carefully supervised. It does happen sometimes that animals riddled with tuberculosis fail to respond to the test, the reason being that the toxines in the tissues swamp the injected tuberculin.

In this country one of the most recent and at the same time reliable series of tests was carried out by Mr. J. McLauchlan Young, under the auspices of the Aberdeen Department of Agriculture. A summary of two separate investigations may be given. In the first series of tests 100 bullocks were tested. On post-mortem examination, 24 were found to be tuberculous, 4 of them having failed to react. Of 60 heifers inoculated, 10 were found to be tuberculous, 4 of these having shown no reaction. The report explains possible causes for these failures in the case of the heifers. The greatest discrepancy occurred among cows. Seventy-seven were tested, of which 42 showed tuberculous lesions, and of these no less than 17 failed to react. Professor Nocard, in criticizing this result, affirmed that if the temperatures had been taken at twelve, fifteen, eighteen, and twenty-one hours after inoculation, the failures to react would have been few. He adds: 'If it should happen that at the twenty-first hour the temperature of certain animals is still rising, without having reached the necessary degree to affirm that they are tuberculous, it is recommended to take the temperature a fifth time—namely, at the twenty-fourth hour after injection.'

In giving his report, Mr. Young refers to three cows which had unduly large doses given to them. Had the ordinary dose been administered, he was convinced no reaction would have taken place.

In a second series of experiments, 42 cows were tested ; 21 proved to be tuberculous, and 17 of these reacted. Of the 4 failures, 1 showed an old-standing lesion, which was encapsuled and no longer active. The other 3 cows that gave doubtful results did not show characteristic reactions. Their temperatures did rise, but only sufficiently to arouse suspicion. ' Possibly,' says Mr. Young, ' in this instance a larger dose of tuberculin would have produced reaction.'

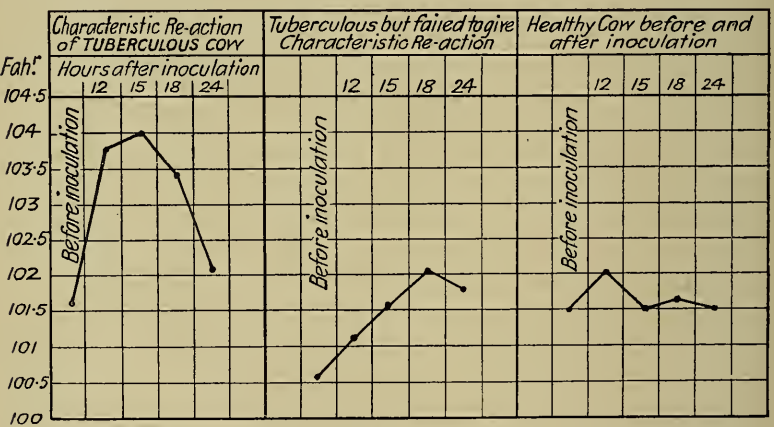


Fig. 24.—Temperatures of Three Cows tested with Tuberculin.

It is of interest to the student to know that of the cows examined 50 per cent. were tuberculous. In both investigations tuberculosis of the udder was encountered in 10 per cent. of the animals. Mr. Young's conclusion is that the temperature of tested animals ought to be taken at nine, twelve, fifteen, and eighteen hours after inoculation. Before inoculation the normal temperature of the animal must be noted. Mr. Young believes in taking the temperature a fifth time, if at the eighteenth hour there is a continued rise which falls short of being characteristic. As a rule, a characteristic rise may be looked for between the ninth and eighteenth hours.

The chart (Fig. 24) shows the different temperatures yielded

by reacting and non-reacting animals. In Numbers 1 and 2, 50 minims of tuberculin were injected; in Number 3, only 18. Had the dose been bigger, the reaction would probably have been characteristic. The gradual rise to 102·2° F. indicates a suspicious reaction. In such an instance occurring in actual practice the animal would be set aside for a second test after the lapse of some weeks. The failure to secure reaction in this case is noteworthy, since it proves how the argument of unreliability may be applied against tuberculin. In point of fact, failure was due to bad practice in injecting too small a dose, a satisfactory dose varying between 30 to 50 minims.

Animals must always be rested for one or two days prior to the application of the test, care being taken to ascertain the normal temperature of the animal. The test must be performed under aseptic precautions, the neck being selected as the seat of puncture. A characteristic reaction should show a rise in temperature of 2·5°; it may be as high as 5° or 6° F.

One need not expect to get a reaction within two or three months of a previous application of the test. This knowledge has been misapplied by dishonest dealers, who secretly inoculated their stock with protective doses and frankly invited the application of the tuberculin test, knowing full well that the results would favour the dealer by proving negative. This trick is known as 'salting.'

Mallein was discovered by a Russian veterinary surgeon named Kalning, who lost his life as the result of infection by glanders. Mallein is analogous to tuberculin in being a diagnostic, and, like that substance, must be carefully employed. Mallein is obtained from the bacilli of glanders, and is prepared much in the same way as tuberculin. When injected into a glandered horse, a swelling appears at the point of inoculation, and with it a rise of temperature occurs. Injected into healthy horses, no reaction takes place. The temperature of the horses to be tested should be taken four times before inoculation. Temperatures must be taken at the twelfth, sixteenth, twentieth, and twenty-fourth hour after inoculation. Should reaction be delayed, as sometimes happens, it may be necessary to take temperatures up to the forty-eighth hour after inoculation. The characteristic swelling denoting reaction is large; its edges are thick and raised, and extremely tender to the touch. A

doubtful reaction in the shape of swelling possesses none of these features, being painless, thin at its edges, and œdematous. Horses may be tested a second time after the lapse of three or four weeks. Whether or not mallein is a curative agent is still open to doubt. It is certain that repeated doses of the substance create a tolerance in the inoculated animal, and no further reactions can be got. It is only by the use of mallein that glanders among horses and mules can be effectually stamped out.

Preparation of Vaccine Lymph.—Arm-to-arm vaccination is now not commonly practised, objections to the principle not being unreasonable. Accordingly, glycerinated calf lymph is now usually employed.

In the preparation of vaccine lymph, young healthy calves are employed. After strapping the animal down on an inclined table, its abdominal surface, previously well cleansed, is scarified with vaccinia. At the end of five days the vesicles are scraped with a sharp spoon, the greatest care being taken to prevent the collection of any blood. To obviate this possibility, the bases of the scarifications are clamped to cut off blood-supply. No lymph must be collected from suppurating vesicles.

The material collected is combined with suitable proportions of glycerine and water, and mixed in a special apparatus. If kept for some time, the glycerine renders the lymph almost free from extraneous organisms, while still retaining its active properties. The use of lymph so prepared has done much to defeat the prejudiced attacks levelled against the proved value of vaccination as a protective against small-pox. Dr. Alan Green has demonstrated that glycerinated calf lymph may be used with safety immediately after collection, if chloroform vapour be employed to kill extraneous organisms.

CHAPTER V

SLAUGHTER-HOUSES

General Considerations

The value of well-equipped and properly-managed slaughter-houses—The defects of private slaughter-houses—The points that demand attention in the construction and amenity of private slaughter-houses—'Lairs' and 'Pounds'—Set of by-laws for private slaughter-houses—Public slaughter-houses: their situation, size, drainage, water-supply, and amenity—Style of erection and the necessary buildings—British and German systems compared—Tripe and gut cleaning—Steam digesters for destroying condemned carcasses—Blood drying and collection—Podewill's apparatus.

EVERY municipality ought to be provided with one or more public slaughter-houses, in which animals intended for the food of man may be killed, examined, and prepared for sale.

Private slaughter-houses should be abolished. Their continued existence can only be excused on the ground that the cost of erecting a modern and well-equipped slaughter-house will be usually grudged.

In small towns and in country districts, private slaughter-houses are a necessity, their sanitary condition and the method of conducting meat inspection in them depending entirely upon the responsible officials. Lax administration will inevitably be accompanied by loose methods, both as regards maintenance of buildings and the conduct of the business.

In country districts quantities of tuberculous and unwholesome meat are sold, because the absence of systematic inspection permits a traffic in what is actually unsound food. It must, however, be admitted that the systematic inspection of meat in country districts is not always easy. Yet, when one knows that retired masons,

plumbers, etc., devoid of any special training in meat inspection, are placed in responsible positions as district inspectors, one is left to surmise how efficient is the control of the meat traffic. It would be a comparatively easy matter to enforce a regulation that slaughtering in private booths should only take place on certain days and at specified hours. This would enable an inspector to pay periodic visits to the slaughtering-booth. Despite systematic inspection of these booths, however, the butcher who desires to conceal or obliterate the presence of disease in a carcass has many tricks at his command, and it frequently demands the closest scrutiny on the part of an expert to detect these fraudulent attempts on the part of the trickster of the trade.

It may safely be said that, where private slaughter-houses exist and reliance is placed upon the detection or seizure of unsound meat already exposed for sale, the supervision of the meat traffic cannot be satisfactory. In other words, meat must be inspected during and immediately after slaughter. In cases of doubt, it is absolutely necessary to examine not only the carcass, but every one of the organs, since the latter may afford valuable clues to diagnosis. In public slaughter-houses this routine is usually enforced. In private slaughter-houses it can only be enforced if the inspector adopts a firm attitude, and refuses to pass carcasses the organs of which have been concealed or destroyed. Now and again a well-nourished carcass may show evidences of widespread tuberculosis. Attempts may be made, and with no little success, to strip affected pleura, or to remove involved glands. Accordingly, when an inspector pays a casual visit, he may, on observing a well-developed and apparently healthy carcass, give the matter no further consideration. It may even happen that long before the official pays his visit to the booth the carcass may have been removed and hung up in the butcher's shop. Such reprehensible practice is well-nigh impossible in a well-administered public slaughter-house. One or more inspectors are constantly in evidence during the hours of slaughter, and each successive step, from the pole-axing of the animal till its final 'dressing,' is easily observed. The term 'dressing,' it may be explained, is used by butchers to imply the final trimming of the carcass after its organs have been removed, and it has been suspended and displayed for inspection.

The objections that may reasonably be urged against private slaughter-houses are as follows :

1. Their frequent proximity to dwelling-houses will inconvenience the inmates by reason of nuisance caused by the keeping of animals prior to slaughter, the operations of slaughter, and the offensive smells given off by garbage and refuse.

2. The disturbances caused by the bellowing of cattle, the bleating of sheep, or the squealing of pigs.

3. Sanitary defects in private slaughter-houses are frequently encountered. The drainage may be defective, or the collection and storage of garbage and filth may be very imperfectly carried out.

4. Supervision is very difficult, and illicit practice on the part of the butcher cannot easily be checked.

A private slaughter-house may belong to one or several persons, and in it several butchers may arrange to kill animals. Unless private slaughter-houses are regulated by means of specific by-laws, the official will find it extremely difficult to control these places.

The points that must be attended to have reference to flooring, smooth wall-surfaces, good lighting and ventilation, adequate dung receptacle, and sound drainage and efficient water-supply. The inside walls, as has been said, must be smooth. Roof-lighting and louvred ventilation should be provided in addition to windows made to open on the side walls. The floor should be impervious, and made to slope towards a gully-trap situated outside the booth. If there be no drainage system available, the liquid sewage must be led to a properly constructed cesspool. The manure-pit must have an impervious bottom, slightly raised above the level of the surrounding ground. The sides of the pit must also be impervious. To carry away liquids oozing from the manure or garbage, a gully-trap must be placed outside the pit itself. This gully must, of course, be connected with a drain or cesspool (see Fig. 13).

Metal barrows ought always to be preferred to wooden receptacles for conveying filth, blood, etc., from the booths to the manure-pit. If blood is to be sold, it must be kept in barrels ready for removal by the purchaser, usually a manure manufacturer or blood-boiler.

In many public slaughter-houses one finds both ' lairage ' and ' pounds ' provided. ' Lairs ' afford accommodation for animals

brought to the slaughter-house; 'pounds,' or 'pends,' are the places where the animals are kept immediately before slaughter.

In private slaughter-houses 'lairage' is seldom provided, on account of the limited space available. Should 'pounds' exist, one must be on the watch for overcrowding, and strict attention must be directed to the cubic space and general sanitary construction of these annexes.

Of the eight principal towns of Scotland, Aberdeen alone still remains unprovided with a public slaughter-house, and as the private slaughter-houses are well controlled by recently-framed by-laws, these have been reproduced, and should be carefully studied. In England public slaughter-houses are the exception rather than the rule.

BY-LAWS FOR THE REGULATION OF SLAUGHTER-HOUSES.

Made in virtue of the powers contained in Section 32 of the Public Health (Scotland) Act, 1897, by the Town Council of the City and Royal Burgh of Aberdeen, as Local Authority for the Burgh under the said Act.

1. In these by-laws the following words and expressions have the meanings hereinafter assigned to them:

'Veterinary surgeon' means a duly qualified veterinary surgeon, approved by the Town Council, for the purposes of the Public Health (Scotland) Act, 1897.

'Slaughter-booth' means any room or place in which any animal is slaughtered.

'Cooling-room' means any room or place within a slaughter-house in which carcasses are kept after slaughtering.

'Lair' means any byre, stall, pen, or other place within a slaughter-house in which cattle are kept before being slaughtered.

'Slaughter-house,' 'occupier,' 'owner,' and 'cattle,' have the meanings assigned to them in the Public Health (Scotland) Act, 1897.

Conduct of the Business of a Slaughterer of Cattle.

2. Every owner or occupier of a slaughter-house shall afford to the Medical Officer of Health, Sanitary Inspector, Veterinary Surgeon, or other person authorized by the Town Council (herein-

after referred to as ' other authorized person '), free access to every part of such slaughter-house at any hour by day, or at any hour when business is in progress or is usually carried on therein, for the purpose of inspecting the condition of the premises and the manner in which the business is being carried on, and for examining any carcass or portion of carcass, or any like animal that may be found therein ; provided that, if such Medical Officer or Sanitary Inspector, or other authorized person, shall have reason to suspect that any diseased or unsound carcass or portion of a carcass, or any diseased or unsound live animal intended for human food, is to be found within the slaughter-house, he shall have right of access to such slaughter-house for the examination of such carcass or animal at any time by night or day.

3. The occupier of every slaughter-house shall enter in a book, from day to day, a statement of the number and kind of animals received into the slaughter-house, together with the names and addresses of the persons from whom the animals have been purchased, and of the persons, other than retail customers, to whom the animals have been sold, and such book, which shall be in such form as the Town Council may approve, shall be open to the inspection of the Medical Officer of Health, Sanitary Inspector, Veterinary Surgeon, or other authorized person.

4. Every animal intended for slaughter shall previous to being slaughtered be kept in a lair, and shall be provided with a sufficient supply of wholesome water, and, if kept for more than twelve hours, shall also be provided with a sufficient supply of food.

5. No animal shall be kept in a slaughter-house for a longer period than may be necessary for preparing such animal for slaughter, and such period shall in no case exceed three days.

6. No animal which has been received into a slaughter-house for the purpose of being slaughtered, shall be removed from the slaughter-house before being slaughtered, except with the consent of the Sanitary Inspector or Medical Officer of Health.

7. No animal shall be slaughtered except inside a slaughter-booth.

8. No animals shall be slaughtered within sight of other animals.

9. Every animal shall be killed as quickly and with as little suffering as may be practicable, and every slaughter-house shall be provided with suitable instruments of this purpose, to the satisfaction of the Town Council.

10. No bull, cow, ox, or heifer shall be felled unless its head has previously been suitably and securely fastened to some part of the slaughter-booth.

11. If any animal in the course of being slaughtered, or any carcass in the course of being dressed or cut up, exhibits any disease or appearance of disease or unsoundness, intimation thereof shall at once be sent to the Sanitary Inspector, and no part of the disease

or unsoundness shall be removed from the carcass until the carcass has been inspected by the Sanitary Inspector or Medical Officer of Health, or other authorized person, nor shall any of the viscera be entirely detached from the carcass until such inspection has been made.

12. If any living animal brought to a slaughter-house for the purpose of being slaughtered, or any carcass or portion of a carcass within a slaughter-house, exhibits any disease or appearance of disease or unsoundness, such animal or carcass, or portion of carcass, shall not be removed from the slaughter-house without the written consent of the Sanitary Inspector or Medical Officer of Health, or other authorized person.

13. The lining membranes of the chest or abdomen shall not be stripped from any carcass until the carcass has been inspected by the Sanitary Inspector or Medical Officer of Health, or other authorized persons.

14. No air shall be blown into the tissues of any carcass or part of a carcass.

15. Every carcass, on removal from a slaughter-house, shall, if conveyed along a street or other public place, be suitably and sufficiently covered.

16. Sufficient vessels or receptacles, properly constructed of galvanized iron or other non-absorbent material, and furnished with close-fitting covers, shall be provided for the purpose of receiving and conveying from the slaughter-house all blood, manure, garbage, filth, or other refuse products of the slaughtering of any animal, and shall be properly cleaned after such use.

17. All blood from any animal slaughtered shall, as far as is practicable, be received in such vessels or receptacles, and, upon the completion of any slaughtering, all manure, garbage, filth, or refuse from the animals slaughtered, shall be forthwith placed in such vessels or receptacles, and no such substance shall be permitted to enter any drain, sewer, or cesspool.

18. All blood, manure, garbage, filth, or refuse from any animal slaughtered, and the hide, fat, tripe, and offal therefrom, shall be removed from the slaughter-house within twenty-four hours after the completion of the slaughtering of such animal, and in such manner and by such means as will not cause nuisance at the premises or in the public streets or elsewhere, and as may be approved by the Town Council.

19. No part of any animal shall be thrown into any dung-pit or ash-pit.

20. No carcass, or part of a carcass, which is offensive or putrescent, shall be kept in any part of a slaughter-house.

21. The floor, walls, internal parts, and fittings of every slaughter-booth and cooling-room shall be kept thoroughly clean by scrub-

bing and washing with water from a hose or otherwise, and the walls shall be lime-washed or otherwise purified and disinfected, to the satisfaction of the Sanitary Inspector, at least four times in every year, namely, in the first week of each of the months of March, June, September, and December, or oftener, if required by the Sanitary Inspector.

22. In no case shall the floor, walls, internal parts, and fittings of any slaughter-booth be permitted to remain in a soiled condition for longer than two hours after the slaughtering of any animal or animals, or the dressing of any carcass or carcasses.

23. Every lair for cattle, and every court-yard and other part of the premises of a slaughter-house, shall be kept thoroughly clean, and the dung and offensive litter shall be swept up and removed at least once daily.

24. The inner surface of the walls and partitions of every lair shall be lime-washed at least twice in each year, namely, in the first week of each of the months of June and December, or oftener if required by the Sanitary Inspector.

25. The means of ventilation, drainage, and water-supply of every slaughter-house shall be kept in good and efficient order.

26. The floor, paving, walls, and other parts of every slaughter-house shall be kept in good order and in a proper state of repair.

27. No slaughter-house shall be used for any other purpose than for the business of the slaughtering of cattle intended for human food.

28. No animal which is not intended for slaughter for human food, nor any carcass which is not so intended, shall be kept in a slaughter-house or received therein ; provided that this prohibition shall not apply to any horse or other animal used for purposes of draught in connection with the business of slaughtering of cattle, but such horse or other draught animal shall be kept in a proper stable separate from any slaughter-booth or cooling-room.

29. No pigs or other animals shall be kept for feeding purposes within or in connection with any slaughter-house.

30. No person shall be admitted into any slaughter-house except on business connected with the slaughtering of cattle, or for purposes of official inspection.

31. Every person offending against any of the foregoing by-laws relating to the conduct of the business of a slaughterer of cattle, and every occupier of a slaughter-house within which or in connection with which slaughter-house an offence may be committed against any of the foregoing by-laws, shall be liable for every such offence to a penalty not exceeding the sum of five pounds, and, in the case of a continuing offence, to a further penalty not exceeding the sum of forty shillings for every day during which the offence may be continued after written notice of the offence from the Town Council.

Structure of the Premises in which the Business of a Slaughterer of Cattle is carried on.

32. The floor of every slaughter-booth and cooling-room shall be constructed of cement or concrete or other impervious material, and shall be evenly sloped to one or more gullies immediately outside the slaughter-booth or cooling-room, to allow of the floor being properly flushed and drained.

33. The walls of every slaughter-booth and cooling-room shall be built of stone or brick, and shall be covered on their inside with a smooth coating of cement or other hard and impervious material.

34. Every slaughter-booth and every cooling-room shall have a proper system of drainage.

35. Every slaughter-booth and every cooling-room shall be provided wth an adequate supply of water for cleansing purposes, in a suitable and proper position, and having a water-tap to which a hose can be readily attached.

36. Every slaughter-booth and every cooling-room shall be provided with a proper and thorough means of ventilation.

37. Every slaughter-booth and every cooling-room shall be adequately lighted.

38. Every slaughter-booth or cooling-room shall be covered with a proper roof, and shall not have any room or loft above it.

39. The arrangements for the suspension or storing of carcasses in every slaughter-booth or cooling-room shall be such as to permit of the ready and proper inspection of the carcasses.

40. The door of a slaughter-booth or cooling-room shall not open directly into any street or lane or other public place, and shall not be so situated that the slaughtering of animals can be seen from any public place or from any adjacent dwelling-house or other occupied place outside the slaughter-house.

41. No lair or stable shall open directly into any slaughter-booth or cooling-room.

42. Every slaughter-house shall be provided with suitable water-closet accommodation, but no water-closet, privy, or urinal shall be in direct communication with any slaughter-booth, cooling-room, or lair.

43. Proper and sufficient provision shall be made by means of covered lairs for the accommodation of animals previous to slaughter, and such lairs shall be properly paved, drained, ventilated, and lighted, and have a convenient and sufficient water-supply.

44. No lair shall be so situated or constructed that animals within it may see into any slaughter-booth.

45. Every court-yard or area forming part of the premises of a slaughter-house shall be properly paved and drained.

46. No dung-pit or ash-pit shall be permitted in any slaughter-house, except with the consent of the Town Council, and where such consent is granted, the dung-pit or ash-pit shall be constructed of cement or other impervious material and be properly drained, and be of suitable size and placed in a proper position.

47. Every part of a slaughter-house and the premises connected therewith, together with all fittings and equipment and drainage, shall be constructed and maintained to the satisfaction of the Town Council.

48. The foregoing by-laws relating to the structure of the premises of a slaughter-house shall not be enforced in the case of any slaughter-house in existence at the date of the confirmation of these by-laws until after nine months from the date of such confirmation.

49. Every owner or occupier of a slaughter-house offending against any of the foregoing by-laws relating to the structure of the premises of a slaughter-house, shall be liable to a penalty not exceeding the sum of five pounds, and in the case of a continuing offence to a further penalty not exceeding forty shillings for every day during which the offence may be continued after written notice of the offence from the Town Council.

50. In addition to any pecuniary penalty imposed for an offence against any of these by-laws relating to the conduct of the business of a slaughterer of cattle or the structure of the premises in which such business is carried on, the Sheriff is hereby empowered to deprive, by summary order, any person, either temporarily or permanently, of the right of carrying on the business of a slaughterer of cattle.

Mode of Application for Sanction to establish the Business of a Slaughterer of Cattle.

51. Every person applying for sanction to establish the business of a slaughterer of cattle in any premises shall furnish particulars as to the situation of the premises, and as to their arrangement and construction and otherwise, in such form as may from time to time be prescribed by the Town Council, and the application shall be accompanied by (1) a detailed descriptive plan, including elevations and sections, of the premises, drawn to a scale of one-eighth of an inch to the foot, in which plan shall be clearly shown the mode of lighting and ventilation, and the arrangement of the water-supply and drainage of every part of the premises; and (2) a block plan, on a smaller scale, showing the situation and distance of the nearest dwelling-houses and other buildings in human occupation.

Instructions for the Guidance of Persons in applying for Sanction and Licence for the Business of a Slaughterer of Cattle within the City of Aberdeen.

1. The business of a slaughterer of cattle cannot be established within the city without the sanction of the Town Council.

2. Sanction is also required for any enlargement of existing premises, or for the transference of the business to fresh premises.

3. Every application for sanction must be made on the prescribed form, which is obtainable from the Sanitary Inspector, and must be accompanied by a detailed plan of the proposed slaughter-house, or of the proposed extension, drawn to a scale of one-eighth of an inch to the foot. A full and true statement of the particulars required in the application form must be made.

4. Besides obtaining the foregoing sanction for the establishment of the business of a slaughterer, every person carrying on such business must apply to the Town Council for a licence for the premises. These licences expire on the 28th day of May in each year, and applications for renewal must be made to the Town Council before the first day of March preceding.

5. Every application for licence, or renewal of licence, must be made on a form obtainable from the Sanitary Inspector.

6. The fee payable to the Town Council for every order relating to the sanctioning of the business of a slaughterer has been fixed at twenty shillings, and for the granting of every licence or renewal of licence at five shillings.

7. Any person establishing the business of a slaughterer, without the sanction of the Town Council, is liable, on conviction, to a denalty not exceeding fifty pounds, and if he carry on the business after such conviction he is liable to a further penalty not exceeding twenty-five pounds for every day which he so carries on the same.

8. Any person carrying on the business of a slaughterer in premises without a licence is liable to a penalty not exceeding five pounds for each offence.

9. If any occupier of a licenced slaughter-house is convicted of an offence under Section 43 of the Public Health (Scotland) Act, 1897, relating to the sale of unsound meat, the Sheriff, Magistrate, or Justice convicting him may cancel the licence for such slaughter-house.

Public Slaughter-houses.

When the provision of a slaughter-house is meditated, the chief points demanding attention are its situation and dimensions. All slaughter-houses should be erected on the outskirts of centres of

population. At the same time, consideration must be given to the convenience of butchers, who will desire the abattoir to be near the live-stock market, which, in turn, must be close to railway sidings. Then, again, the prevailing winds fall to be considered, otherwise any effluvia emanating from the slaughter-house will be a source of oft-recurring complaint from the affected inhabitants.

Drainage facilities and available water-supply must also be taken into account when selecting a site. It may be necessary to provide separate drainage for the slaughter-house, altogether disconnected from the town's system; but this is such a remote contingency, entailing, as it will, heavy expenditure, that it need scarcely be taken into serious consideration. In any case, ample provision must be made for the complete periodical flushing out of those sewers and drains intimately connected with a large slaughter-house. Much animal matter, including blood, reaches the sewers, and in summer, when the rate of flow in them is slow, systematic flushing must be practised.

The need to have slaughter-houses far removed from human habitations is considerable, since the modern tendency favours the conversion of residuum into marketable and often valuable matters. These processes will be referred to in another part of the book. It is necessary to remark that modern appliances intended for the boiling down of carcasses and to make manurial powders are so designed and constructed that during these operations a minimum of nuisance is created. If, therefore, nuisance from either of these processes be complained of, the complainer will be required to prove that every practicable means was *not* being adopted to prevent the occurrence of nuisance. A certain amount of nuisance must be expected in connection with a slaughter-house, be it large or small; but efficient supervision in well-constructed and properly-equipped abattoirs will effectually control the degree of nuisance. The reverse applies to old buildings that are badly managed.

A question of no small importance relates to the driving of cattle to the slaughter-house or market through busy thoroughfares. Unless hours be fixed during which cattle may be so driven, accidents and nuisance may be expected.

Size and Style of Buildings.—Most authorities are agreed that the component parts of a slaughter-house should be grouped

to form a quadrangle. And round about the buildings full allowance must be made for possible extensions, as well as ample 'lairage.' Much depends upon the comfort and general construction of 'lairs,' since all animals prior to slaughter are allowed to rest for twenty-four hours. An animal rendered fretful and footsore, or exhausted by overcrowding in a dingy, narrow, and badly-paved 'lair' will, after slaughter, exhibit fevered, harsh, and dry flesh. Such flesh may not be actually condemned, but will be less valuable to the butcher.

The area of ground which it is proposed to set aside for the erection of a slaughter-house is based upon the number of inhabitants to be served. Thus, for towns having 7,000 or more inhabitants the allowance is 4 square feet of ground for every head of population; for 5,000 to 7,000, $4\frac{1}{2}$ square feet; for 3,000 to 5,000, $5\frac{1}{2}$ square feet; and for 3,000, $6\frac{1}{2}$ square feet. This computation does not take future extensions into consideration.

There are occasions when the above allocations may have to be departed from. For instance, Edinburgh and Leith, though under different municipal governments, are, to all intents and purposes, one city, there being only a parliamentary line separating them. Each corporation possesses its own public slaughter-house, but comparatively few of the Leith butchers make use of their own abattoir, because that in Edinburgh, on account of its close proximity to the live-stock market, is more convenient. Consequently the Leith slaughter-house, well equipped in every respect, is much smaller than it would have been had the two municipalities been further apart.

The Buildings Necessary.—Where large numbers of pigs, sheep, and other cattle are slaughtered, the provision of 'lairs,' 'pounds,' and booths must be ample. There must also be commodious triperies, as well as detached buildings for housing sick animals, and for suspending carcasses for review by the meat inspectors. 'Condemned cells' must also be provided, it being advisable to furnish these with locks which can only be fitted by a key in the possession of the chief meat inspector. Boiler-houses will be necessary for the supply of steam to drive machinery used in connection with tripe-cleaning. Cold stores may be erected for the convenience of butchers; and if the slaughter-house be in an

FIG. 25.—PLAN OF LEITH CORPORATION PUBLIC SLAUGHTER-HOUSE.

B, B, B, Booths for animal slaughter; C L, cattle lairs; P P, pigsties; P, pig-killing house, with plotting-tanks, etc; B, large booth used for condemned carcasses; S P, sheep-pends; D S, dung-stead; D, steam digester; B, boiler; T, tripery; O, office with superintendent's house above; S Y, steelyard for weighing.

important centre, the chief meat inspector, usually a qualified veterinary surgeon, will require a well-furnished laboratory and microscopic room. The superintendent of the slaughter-house is often resident on the premises, and in addition to his dwelling-house and office, accommodation for staff, such as dining-rooms, lavatories, etc., are necessary. In this country the plan followed in the arrangement of a slaughter-house differs from that favoured in Germany, that country being specified because in the direction of meat control we have much to learn from our continental friends.

In British slaughter-houses small booths are used in which animals are killed, whereas in Germany one or more large well-lighted halls are provided. In either case the animals may be stalled in ' pounds ' attached to the booths and halls, sliding-doors admitting animals for slaughter.

It will be generally agreed that the superiority claimed for the German system is real, since a meat inspector can watch the successive steps of slaughter and preparation of carcasses under one roof. In the case of booths separated from one another, when perhaps several animals are being simultaneously killed, the utmost vigilance of an inspector is required to closely supervise operations at different places.

A visit to the Glasgow Corporation Central Slaughter-house at Moore Street will convert one to a belief in the German system as opposed to our own. The pig-killing hall is a commodius erection, and in it every convenience is available for the killing, plotting, dressing, and hanging up of pigs. The inspector can see everything that is going on at a glance. Not so, however, when he comes to inspect the butchers who, in different booths, are busily engaged with pole-axe, pithing-cane, or knife.

Another feature in which Germans excel is the provision of killing-halls for large as well as small animals. In this country the booths are used for oxen, sheep, or calves, pig-killing being invariably performed in a separate place, where plotting-tanks are necessary fittings. After a pig has been killed and bled it is immersed for a few moments in a tank filled with very hot water. This operation loosens the bristles, which are then easily scraped off by the butcher.

As has been said, all lairs and pounds must be well ventilated and

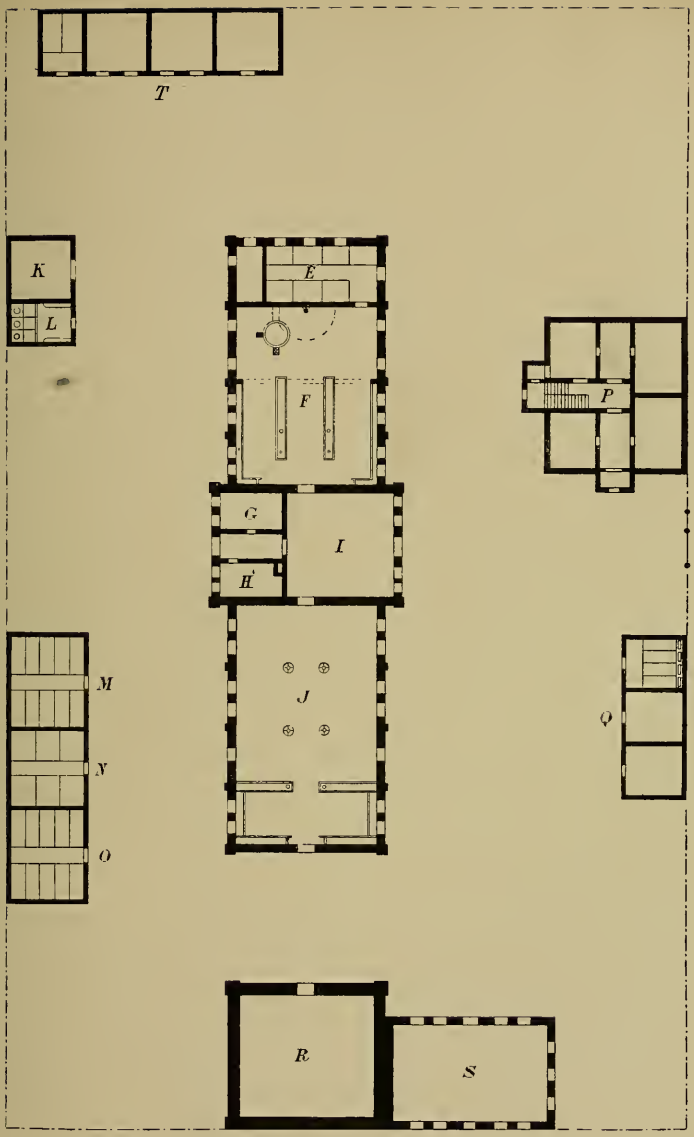


FIG. 26.—PLAN OF GERMAN SLAUGHTER-HOUSE.

E. Pig-sties; F, slaughter-house for pigs; G, butcher's room; H, boiler-house; I, tripe-house; J, slaughter-hall; K, manure pit; K, lavatories, etc; M, lairs for small animals; N, for large animals; O, emergency accommodation; P, superintendent's house and office; Q, stables, etc.; R, refrigerating plant; S, engine. T, Stalls for condemned and sick animals.

lighted, their floors being impervious. Watering-troughs are also required. If any live animal be suspected to be suffering from disease, it may be stalled in a building specially set apart. Sheep are penned together, as also are pigs. Frequent limewashing and cleansing should be practised to maintain these pens in a sanitary condition.

Booths must be provided in which diseased carcasses can be displayed for examination at the hands of the meat inspector. Condemned carcasses may then be removed to the 'condemned cell' to await final destruction, as will be presently described. The carcasses of animals that have died of anthrax are immediately buried or cremated, as required by the Anthrax Order. The height of booths or killing-halls should never be less than 10 feet.

All slaughter-houses must be provided with an abundant supply of pure water. The drainage system must be of sound construction. The more frequently and thoroughly slaughtering-booths are douched out with water the better will the sanitation of the premises remain. If the internal walls be lined with glazed enamelled bricks or ½-inch tiles, the cleanly appearance of interiors will be enhanced.

In place of a manure-pit it is best to provide metal carts, which will be removed as soon as they are filled. When there is a manure-pit, its capacity should be small in order to necessitate frequent emptying.

Rooms for Offensive Trades.—In arranging the various buildings, it is usual to group them in such a way that a boiler will be within convenient reach of those booths and halls in which steam is necessary. In large slaughter-houses, for instance, enormous numbers of tripes (stomachs) are cleansed by means of revolving brushes actuated by machinery. The hall in which tripe-cleaning is carried on must be very well lighted and ventilated, and the walls and floors of good construction. The conduct of this business is filthy in the extreme, and the floors are constantly wet. Great attention must be paid to the drainage facilities of the tripe-cleaning rooms.

Attached to this hall may be one in which hoofs are removed from the feet of animals. The feet are immersed in a large hot-water

tank, the steam from which must be caught up by a hood, its outlet being led into a flue or chimney, fans aspirating the steam upwards.

With regard to the *separation of hoofs*, the process is as follows : After the plotting of the feet in hot water, the hoof is loosened, and easily detached by a deft movement against a hook fixed in the wall. Then with a sharp knife the operator peels off the coarser portions of skin round the foot, the feet being then ready for sale. Amongst the poorer classes roasted feet are considered to be a great delicacy.

It is scarcely necessary to repeat the need for good lighting, ventilation, and impervious flooring in such a hall. It is important that metal receptacles should be provided for containing the parings and scrapings from the feet after the hoofs have been removed. The hoofs and parings may be sold to gelatine or glue manufacturers.

Tripe Cleaning.—Rapidly-revolving brushes remove the grosser impurities from the tripes, which are plunged into a hot-water tank. Subsequently the tripes are suspended from a hook fixed in the wall, and the mucous membrane peeled off with the fingers. The tripes are then immersed in cold water until the butcher comes to claim them. In small slaughter-houses, where the output of tripes is small, no machinery is provided, consequently hand-cleaning is practised. Hand-cleaned tripe is invariably preferred by the butcher, who knows that the 'bags' are purer than those dealt with by machinery.

In another airy building, detached from the booths where meat is exposed for sale or inspection, *gut-cleaning* is carried on. This is another nuisance-provoking trade, and in addition to the smooth-topped tables on which the guts are cleaned and scraped, there must be water-tanks in which the cleansed intestines are immersed. Metal receptacles must be provided in which to collect the evil-smelling garbage.

Fat Extraction.—Every public slaughter-house ought to be provided with one or more steam-jacketed digesters, in which the carcasses of condemned animals may be treated in order to extract fat from them. Heretofore it has been usual to boil down condemned carcasses (anthrax excepted) in open vats. This method is slow, extravagant, and not profitable. Since the steam digester replaced the open vat at the Leith Corporation slaughter-house

the quantity of fat extracted and sold to tallow-merchants has been more than doubled. The boiler which supplies steam to the jacket of the digester also provides steam for the tripery and pig-killing house. Thus one fire performs the work which formerly demanded the employment of two, one for boiling down carcasses, the other for maintaining a supply of hot water in the tripery. So pure is the fat extracted that it yields a very good revenue, over twenty shillings per hundredweight being paid for it by tallow-merchants. The following description indicates how carcasses are dealt with.

A carcass, after having been cut into pieces of convenient size, is packed into a wire cage, which is let down by chain and pulley into the digester. With its lid clamped down, the digester forms an autoclave on a large scale. Steam is not admitted into the body of the digester, but into a jacket surrounding it. The pressure at which the steam is maintained in the jacket varies between 40 and 50 pounds to the square inch, and after several hours the fat is thoroughly extracted from the bones, etc. The fat in a liquid state is drained off at an opening at the bottom of the digester, the cage being hoisted up, and its contained bones decanted and sold to manure manufacturers. Pig-keepers eagerly buy the macerated flesh, which is well charged with nitrogenous matters. A detached building will be necessary for the installation of a steam digester, since from beginning to end of operations in connection with the digester the smells are objectionable. The building must be well lighted and ventilated, and the cement-covered floors ought to be periodically washed with soda and hot water to remove accumulations of grease. Metal receptacles ought to be provided for storing the bones and flesh removed from the digester.

Blood-drying rooms are still found in connection with some slaughter-houses, but the value of dried serum, the fluid part of the blood, which has already been referred to, has so markedly declined that no encouragement need be given to the continuance of this evil-smelling process. It is better to collect blood in barrels, which, when full, are periodically removed by a person contracting for the purchase of the blood.

Blood in small quantities is bought by sausage-makers for the manufacture of blood-sausages. These are made by mixing bread,

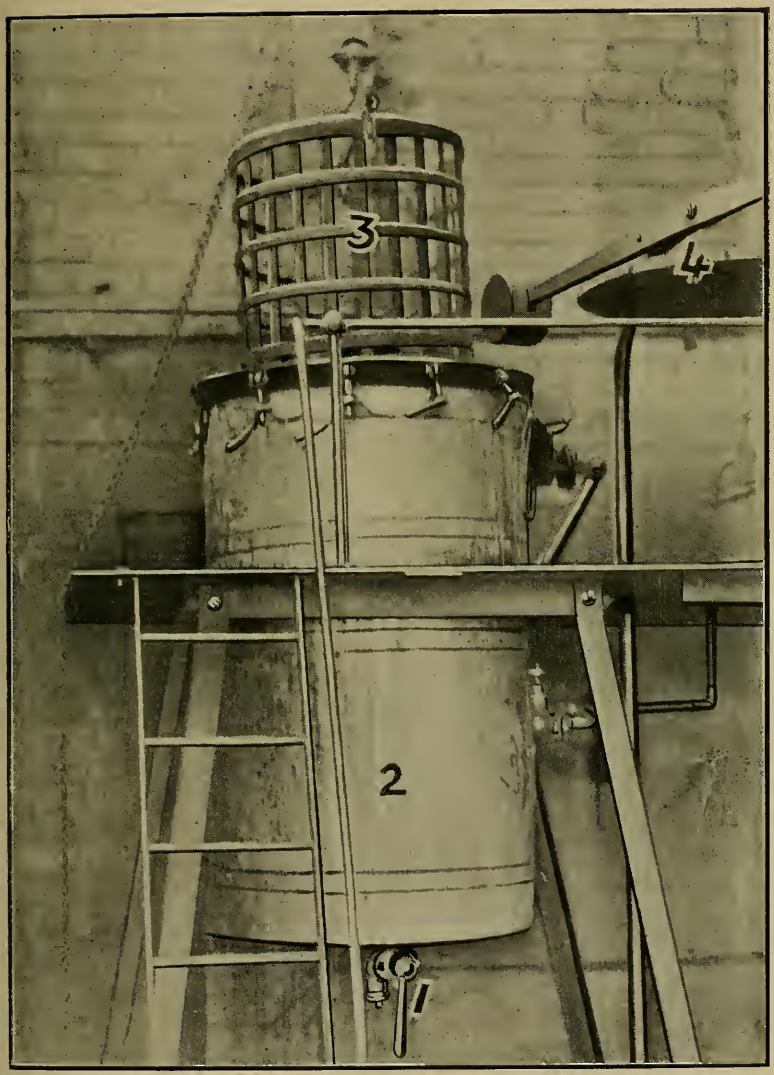


FIG. 27.—STEAM DIGESTER.

1, Bottom tap for draining off melted fat; 2, casing of digester; 3, wire cage for containing cut down carcasses; 4, lid of digester.

oatmeal, spices, and blood, and packing the mixture into cleaned intestines, to be subsequently cooked in pans made for the purpose. The fumes emanating from boiling blood-sausages should be carried off by a hood fitted over the boiler. An alternative method of carrying off the effluvia is to lead them into the chimney by a special flue attached to the lid of the boiler.

Another process which will yield a good source of revenue is that of *manure manufacture*, but it will only be under exceptional circumstances that this trade may be carried on. *Podewill's apparatus*, though costly, will soon repay itself, since in it blood, garbage, and fish offal may be converted into a guano-like powder of high manurial value. Podewill's apparatus consists of a jacketed steel boiler, inside which revolving arms are fitted. Steam is led into the jacket, and the contents of the inner chamber continually stirred by the arms rotated by machinery. At the end of a specified time the contents are converted into a fine meal-like powder, which is collected in sacks or barrels and sold to manure manufacturers, who use the poudrette as an excipient for the manufacture of fertilizing stuffs.

CHAPTER VI

THE APPEARANCES OF HEALTHY AND DISEASED ANIMALS

The need for veterinary inspection of living animals—The difficulties of the public health official—Cross-swearing in 'meat cases'—Unfortunate results—The value of observation on the part of the health official—Consideration of various diseases, injuries, etc., encountered among animals sent to the slaughter-house—Pulse rates—How to count the pulse—Temperatures of cattle and horses.

During his round of inspections the health official may detect an animal or animals that appear to be either diseased or unsound. Under such circumstances the aid of a duly qualified and competent veterinary surgeon should be enlisted. Mistakes are now and then committed by relying too much on external appearances alone. The onus of declaring whether a living animal is sound or not should therefore be placed upon the shoulders of a veterinarian, whose special training qualifies him to pronounce opinions upon such animals.

It is specially when animals reach the slaughter-house, or are in course of transit to that place, that seizure is liable to take place. Under the Public Health Acts of England and Wales, Ireland, London, and Scotland, the responsible official is, under special circumstances, vested with powers to seize any animal alive or dead.

Disputes are not likely to arise at the slaughter-house itself, since the presence of the animal there proves that it has been consigned for human food. It is when seizure is threatened at a market or railway siding that strenuous opposition may be offered by the consignee, who vigorously protests against any intended attempt on his part to evade public health enactments. And to further complicate matters, the health official may find himself confronted

by an array of professional and lay experts, all prepared to swear that the obviously diseased animal was, at the time of its seizure, in good condition, and quite fit for human food.

It may be safely said that more cross-swearing is heard in connection with ' meat cases ' than in any others in which the health official may find himself involved. As a result of this conflict of opinion, many unsatisfactory decisions are given. Such verdicts, while based upon evidence given in the witness-box, are utterly at variance with public health interests, since by escaping punishment the trickster of the trade is permitted to continue his nefarious dealings in poor stock. Honest butchers and dealers of repute eschew this trade in low-class animals.

As has been said, the sanitary official cannot be expected to possess the skill of a qualified veterinarian, nor must he profess expert knowledge when called upon to examine living animals. Nevertheless, an intelligent and quick-witted official will be able to use to good purpose such knowledge as may be gained by a careful and appreciative study of his subject. It may also be added that the observant official, aided by practical experience, will seldom be found in error when his suspicions become fixed on an animal suspected to be unsound or unfit for human food.

Should a number of animals be collected together in pens or lairs, attention must be directed to those exhibiting signs of disease, malnutrition, or injury. Amongst cattle especially it will be easy to single out the well-set-up, plump, flat-backed, sturdy animals from their listless fellows, exhibiting rough, staring hair and hide-bound. Animals that are sick may not only be lying down, but loath to rise, even after considerable goading. A muco-purulent discharge flowing from the nostrils and a resounding, hollow cough, accompanied by rapid breathing, will lead one to suspect *tuberculosis*. While hurried breathing leads one to suspect pulmonary disease, it must be kept in mind that animals hurriedly driven will ' blow ' for a considerable time after coming to a standstill. Cattle housed in ill-ventilated sheds will, on account of their being deprived of oxygen, evince laboured breathing.

While most tuberculous animals are thin, scraggy, and hide-bound, a hasty conclusion must not be formed regarding every beast presenting such appearances. An instance may be quoted in

support of this warning. While visiting the abattoir, a thin dairy cow was led into a slaughtering-booth. The animal was scraggy and hide-bound. Anxious to demonstrate to his pupils the post-mortem appearance of what was considered a typical 'piner,' the writer laid stress upon the animal's miserable condition; and, looking to the fact that the cow had been living an unhealthy life in a badly-ventilated cowshed, the pupils were advised to expect a good instance of tuberculosis. After slaughter, the carcass was opened and carefully examined, but no vestige of tuberculosis could be detected. The only evidence of disease was a huge mammary abscess, which contained quantities of evil-smelling pus. The animal was thin because it had been housed in an unhealthy byre, and besides suffering great pain, had been subjected to continuous milk depletion for months on end.

A healthy animal ought to be alert and full of energy. When a healthy animal has been resting and calmly chewing its cud, it usually defæcates when it rises. A swollen condition of the abdomen, due to tympanitis or 'hoven,' peritonitis, and intestinal obstruction, will be accompanied by restlessness, arched back, and groaning. If only one nostril shows discharge, the cause is probably local. Discharge from both nostrils indicates general weakness of the animal.

Swellings on the jaws lead one to suspect the existence of the condition known to butchers as 'lumpy jaw' (*actinomycosis*). In *ox nettle-rash* the head is swollen, a similar condition being found in horses suffering from *influenza*.

Cattle may be unable to walk owing to *fracture of the pelvis*, a not infrequent accident caused by the sudden slipping apart of the hind legs on wet pavements or greasy cobble-stones. Ruptured tendons and fractures of the limbs also cause lameness. *Lameness* may be caused by foot-soreness induced by the driving of animals along rough roads, especially if the animals have been led from pasture land, where the soft turf has been like a carpet to their feet. Animals transported by rail now and again exhibit signs that might be mistaken for an impending seizure of anthrax. The affected beast staggers as if giddy, its appetite and rumination being lost. The temperature does not rise, but the pulse is accelerated to 100. Respiration may become spasmodic, and death may result.

Dropsy reveals itself by *œdema*, water-logging, which may be general or local. This dropsy may be caused by *heart disease*, due either to organic changes in the heart, or to impacted needles, nails, hairpins, etc., penetrating the stomach walls, and finally lodging in the heart. The œdema of dropsy pits on pressure, inflammatory swelling does not. A one-sided bulging of the abdominal wall points to the presence of tympanitis or 'hoven' induced by indiscretions, or over-indulgence in food.

While grunting in the pig is characteristic, the absence of sound may demand a closer examination of the animal.

Pigs that have been housed in damp and insanitary sties not infrequently suffer from *rheumatism*, which is detected by the swollen condition of the joints. The animals move with great difficulty, or are unable to walk. So much do these unfortunate brutes occasionally suffer that the skin over the swollen joints becomes ulcerated and bleeds. Immediate slaughter will alone relieve these animals from their sufferings. As a rule, the pigs are permitted to wallow in filth until the disease abates. Cattle, sheep, and pigs affected by *foot-and-mouth disease* stamp their feet and salivate.

Skin diseases, *sheep-scab*, and *itch* prompt the affected animals to rub themselves against posts, etc. *Rigors* (shivering) suggest inflammatory mischief, just as they do in the human being. *Ringworm* must be looked for when examining live animals. Also at certain seasons of the year milch cows suffer from *cow-pox*. Swellings elastic to the touch are felt under the integument. These protuberances contain larvæ.

In cattle the pulse-rate averages 40 a minute. In the horse the rate is slower, but in sheep and dogs it is about 80. It is difficult to ascertain the normal pulse of sheep, because it is only after the animal has been chased and caught that it can be examined. Even then it retains its excitement. In horses the pulse is felt inside the edge of the jaw, in cattle on the outside edge. The tail also yields a reliable pulse-rate. To count the pulse in dogs and sheep the femoral artery inside the thigh must be felt. Temperatures are taken by inserting the thermometer in the bowel and tying the instrument to the tail. In cattle the normal temperature is about 101·5° F; in the horse 100° to 100·5° F. A rise of temperature one degree above the normal should arouse suspicion.

CHAPTER VII

ANATOMICAL CONSIDERATIONS

Skeletal formation : spinal column, ribs, breast-bone, haunch-bones, shoulder-blade, forearm bones, skull—The stomach and its compartments, its capacity and functions—Causes of fermentation in stomach—Rennet and its manufacture—Tripe cleaning—Intestinal tract, liver, spleen, kidneys, heart, blood, lungs, pleura and peritoneum—Uterus—Bone-marrow in cattle and horses—Lymphatic system : the situation and names of various glands.

For the benefit of the student who is anxious to dip a little more deeply than usual into the question of meat inspection the following anatomical facts may be of value in the pursuit of his studies :

Skeletal Formation.—The spinal or vertebral column in ruminants is composed of the following parts :

Cervical region,	comprising	7	bones.
Dorsal	,, ,,	13	,,
Lumbar	,, ,,	6	,,
Sacral	,, ,,	5	,,
Coccygeal	,, ,,	16 to 20	,,

As compared with those of the horse, the vertebræ of the ox, especially in the dorsal, lumbar, and sacral regions, are more massive. The sacrum of the ox is more arched than that of the horse, and its upper surface more convex. The coccygeal vertebræ of the ox are also stronger than those of the horse.

Ribs.—The ox, sheep, and goat possess thirteen pairs, eight true and five false. The pig has fourteen pairs. The ribs of the ox are straighter, broader, longer, and not so arched as those of the horse. The necks of the front ribs are short, and their tuberosities prominent. The necks of the posterior ribs are long, thin, and smaller than those of the horse. In the ox the sternal ends

of the ribs expand and articulate with their cartilages by means of true joints. In sheep and goats the sternal ribs are fixed to their cartilages.

Sternum.—This bone is flat above and below, and not from side to side, the superior surface, which forms part of the floor of the thorax, being concave. The ensiform, or shovel, cartilage is large and round. The seven bones which constitute the sternum, or breast-bone, of the ox are more closely united than those of the horse. In the ox the manubrium, or handle, of the sternum moves laterally by means of a true joint. This joint does not exist in sheep and goats.

Pelvis.—The pelvis (haunch-bone) and symphysis of the ox are very long. The innominate bones of the ox and horse are of the same shape, that of the former being longer. In the ox the symphysis is never completely ossified.

Femur and Leg Bones.—The femur, or thigh-bone, of the ox differs from that of the horse in being without a lesser trochanter. The *tibia* of the ox has no articular surface for the fibula, which is represented by a long ligament extending the entire length of the tibia. In most ruminants the fibula is rudimentary. In the ox the external malleolus is represented by a separate bone, known as the malleolar bone. The fibula is always present in the horse. The tarsus is made up of five bones.

Scapula, Shoulder-Blade.—This bone is large and triangular-shaped. In the ox the spine is prolonged, and ends as the pointed acromion. In the horse the spine ends at the neck of the bone.

Forearm Bones.—The forearm bones of the ox are short, almost completely fused together, and their movements very limited. The ulna in the ox is longer and thicker than that of the horse. In the ox and sheep there are only six bones in the carpus.

Cranium.—The skull of the ox differs from that of the horse, especially in the formation and extent of the frontal and parietal bones. The frontal bone of the ox extends from the nose to the ridge of the head. In the horse the frontal bone extends from the orbit to the top of the skull. The frontal bones of the ox also offer supports for the horns. The forehead of the bull is shorter and broader than that of the ox or cow. In hornless cattle the frontal bone ends in an elevated ridge at the top of the skull.

To prevent injury to the brain from butting, etc., the frontal bones of cattle are very strong, being composed of two layers of bone separated from one another in some parts by an intervening space of an inch. The cavities of the orbits, nostrils, and frontal sinuses intercommunicate, so that the spread of inflammatory affections from one part to another is rendered easy.

Stomach.—In ruminants the stomach is a complex organ consisting of four compartments, each possessing special functions. The food of ruminants is comparatively deficient in nutrient matter. The ingestion of enormous amounts is thus rendered necessary, and to accommodate these quantities a large stomach is called for. In flesh-eating animals and in the horse the stomach is of simple construction. This difference in formation accounts for the fact that fermentation of food takes place in the complex stomach of the ox, whilst in the horse fermentation occurs in the intestines. In flesh-eating animals the simple form of stomach is absolutely necessary in order to hasten digestion, and so obviate fermentative changes.

Fermentation not infrequently occurs when cattle are permitted the sudden and indiscriminate use of clover or rich pasture. This causes an enormous and painful distension of the rumen, such tympanitis being known among farmers and cattle-owners as 'hoven.' Sheep and horses are also attacked by tympanitis. Another accident that may occur in the complex stomach is impaction of food in the folds of the omasum, the peculiar construction of which lends itself to such contingencies.

The stomach of cattle occupies the greater part of the abdominal cavity, the capacity of the stomach being about 55 gallons. In fat oxen the stomach and intestines, when empty, weigh respectively 2·7 per cent. and 1·4 per cent. of the total weight of the animal. As in the sheep, the stomach of an ox is divisible into four portions, known as the rumen or paunch, reticulum or honey-comb, omasum, psalterium, or manyplies, and lastly, the abomasum or rennet. The sheep's rumen differs from that of the ox in possessing a conical process on its under side.

The first three compartments are mainly concerned in the maceration of food, the rennet being the true digestive stomach.

In the ox the rumen occupies three-quarters of the abdominal cavity, is situated on the left side of the animal's body, and con-

stitutes nine-tenths of the whole stomach. The spleen is attached to the left of the rumen. The œsophagus, or gullet, opens into the rumen, which receives the partially masticated food. The reticulum lies in front of the rumen, the omasum and abomasum to its right. When calves are being reared on milk the paunch is not called upon to perform its functions, the milk passing directly into the omasum, and thence to the abomasum or rennet.

The rumen is divided by a fissure into a right and left lobe, the latter receiving the œsophagus. The right lobe is covered over by peritoneal omentum. The posterior end of the rumen comes in contact with the genito-urinary organs, the anterior touching the diaphragm.

The reticulum or honey-comb, which is the smallest of the four compartments, is elongated from side to side, and lies between the left half of the rumen and the diaphragm. The reticulum derives its name from the honey-comb-like appearance of its internal coating. Foreign bodies are not infrequently found impacted in the honey-comb. This compartment communicates with the œsophagus, rumen, and omasum.

The omasum, or third compartment, is ovoid in shape, and receives the food after it has been remasticated. Its mucous membrane is arranged in leaves or folds, following the long axis of the chamber which communicates with the reticulum by means of a narrow neck.

The abomasum, rennet, or reed, ranks next in size to the rumen. In the young animal it is specially large.

After partial mastication the food passes into the rumen, where further trituration takes place. When the animal proceeds to chew its cud the food is regurgitated by means of the strong voluntary muscular walls of the œsophagus. After being subjected to a second chewing process, the food passes into the omasum, where it is compressed and thoroughly macerated between the folds.

It is believed that the omasum acts chiefly as a reservoir for fluids, solids discovered in this compartment being invariably found well diluted. As has already been said, gastric digestion takes place in the rennet.

In *making cheese*, *curds* and *whey*, or *junket*, rennet is largely employed, the substance being derived from the inner coat of the

fourth stomach. As soon as the calf is killed the stomach is removed, and the soft, velvety lining membrane of the rennet scraped off. When this product is salted and dried it can be kept for a long period. The secretion of this portion of the stomach has an acid reaction. Nowadays the milk-curdling ferment (rennet) is made and sold in the form of an extract, its preservation being secured by the addition of alcohol.

If the stomach is not properly cleansed at the slaughter-house, and if during hot weather tripes be kept in tubs containing filthy water, many complaints from purchasers will be made to the health official. Good tripe is a delicacy, but at certain seasons of the year, in summer especially, it is not wise to use it. Under the closely-packed folds of the manyplies filthy matters pass the observation of the tripe-cleaners, and putrefactive changes rapidly take place. In the poorer localities of his district the official may observe tripes hung up on hooks to attract attention. Needless to say, exposure to the heat of the sun's rays and to street dust is not conducive to the good preservation of tripe. In well-regulated butchers' shops tripes are stored in glazed stoneware dishes containing clean water and fitted with covers. This procedure should always be insisted upon. Scotch haggis is encased by a compartment of the sheep's stomach.

Intestinal Tract.—The small intestines of the ox measure 140 feet, those of the horse 70 feet. The large intestine of the ox is 36 feet in length. In pigs the intestines are 72 feet long, 56 feet of this length being monopolized by the small intestines. In sheep the intestines measure 108 feet. In dogs, cats, and carnivorous animals there is no differentiation between large and small intestines.

The small intestine of the ox is smaller in calibre than that of the horse, and possesses more convolutions. The duodenum of the ox is widened, and its Peyer's patches, though larger, are not so numerous as those found in the horse. In the ox there is no separation of the colon into great and floating portions, as is found to exist in the horse.

The Liver.—In the ox this organ is a very thick mass situated in the right hypochondrium. It consists of four lobes, two large and two small, with a pear-shaped gall-bladder situated behind

the organ. The large lobes are known as the right and left, the smaller as the quadrate and spigelian, which are situated above and behind the main mass of the liver. The cystic and hepatic ducts join to enter the duodenum. In the horse the gall-bladder is never present, and the liver is three-lobed ; weight, 6 to 8 pounds. The liver of the ox weighs between 12 and 15 pounds, or about one eighty-fifth of the total weight of the animal's body. In sheep and goats the liver weighs about one fifty-third of the total weight of the animal, or between 1 and 2 pounds. Butchers are led to speak of large and small sheep livers on account of the varying weights of that organ. The pig's liver has four lobes, in addition to the quadrate and spigelian. Its weight is from 2 to 4 pounds.

Though the reddish-brown colour of the liver is almost universal, one may come across instances in calves and young oxen where the organ is yellowish. Fatty infiltration may also be found in the livers of animals specially fed for the butcher.

Spleen.—In Scotland the butchers call this organ the melt. The spleen of an ox is long, flat, and oval-shaped, not unlike the human tongue on a large scale. The size of this organ varies, and in healthy animals it attains its largest size five hours after digestion. Its weight in oxen is about 2 pounds. The sheep's spleen weighs $3\frac{1}{2}$ ounces.

In bulls and fat oxen the organ is brownish-coloured, firm, thick, and biconvex, with rounded edges. In the cow its surfaces are flat, the edges sharp, and the colour slatey-blue. In the calf the spleen varies in colour between reddish-brown and bluish-red, both surfaces being convex and the edges rounded. The spleen is not used for human food. To the meat inspector this organ is an important one, since its great enlargement in anthrax is characteristic.

In goats and sheep the shape of the spleen differs in no way from that of cattle. The colour of the organ in these animals is reddish-brown, becoming dark red after exposure to the atmosphere. The surfaces and edges are convex, and the weight about 2·11 ounces. The pig's spleen is tongue-shaped, of bright red colour, becoming darker after removal from the body ; weight, 6 ounces. In the horse the spleen is sickle-shaped, flat, and of a violet hue,

which changes to a reddish-brown after the organ has been hung up for some time. The edges of the organ are rounded.

The Kidneys. — In well-nourished carcasses the kidneys are hidden under a heavy layer of fat. In thin animals, or those that have been the subjects of wasting disease, the deposit of fat in this region is very scanty. This is an important fact to bear in mind when examining carcasses. In cattle the surfaces of the kidneys show lobulation ; in the horse the surfaces are smooth.

In cattle the right kidney is fixed to the abdominal wall, the left being free. The weight of each kidney is about 1½ pounds. In bulls and oxen the kidneys are heavier than those in the cow. The right kidney of the horse is heart-shaped, the left shaped like a bean. The kidneys of a horse weigh about 2 pounds.

In pigs, sheep, and goats, the kidneys are bean-shaped, and smooth on the surface.

Heart.—In animals that have been well bled small quantities of blood may be found in the chambers, the coronary veins being empty. In the hearts of cattle two small bones (ossæ cordis) are found in the fibrous ring of the aortic valve. These bones are not present in the horse. In old pigs the cartilage found at this point may have become ossified. The heart of the ox is more conical than that of the horse, and there is more fat round it. In old sheep a small bone is sometimes found on the right side of the heart.

Blood.—Most of the blood collected at slaughter-houses in this country is stored in barrels and sold to manure manufacturers, who treat the blood, after mixing it with garbage, fish, offal, etc., in steam jacketed cylinders—*e.g.*, Podewill's apparatus—in order to convert the mass into a powder, which commands good prices as a basis for the manufacture of artificial manures and soil-fertilizers. Blood-boiling creates so much nuisance that the process is not encouraged. When used for making sausages in the form of ' black puddings,' blood is mixed with bread, oatmeal, and condiments, and packed into the prepared intestines of cattle. After this the ' puddings ' are boiled, and unless proper precautions are adopted to destroy or carry away the resulting fumes by leading them over a fire or into a flue, nuisance may be created.

It must be noted that when blood is to be used for human food—*e.g.*, in the making of ' black puddings '—precautions must be

adopted against possible contamination. In the neck stab, for instance, great care must be taken to avoid wounding of the œsophagus, lest contamination of the blood with stomach contents should take place.

At many slaughter-houses provision is made for the separation of serum from the blood. This is effected by gravitation, the serum exuding from the blood-clot and dropping through perforated metal trays to be caught by flat dishes. The serum is subsequently dried in specially heated compartments, the resulting scaly preparation being used as a mordaunt for dyes. Since the prices of dried serum have fallen very considerably, the practice of preparing it in the manner described is being departed from. Very offensive odours are created during the drying process. The blood-clot left over is sold to manure manufacturers. Albumin may be extracted from the blood, and in Germany peptone foods are prepared from it.

Lungs.—Among butchers these are known as the *lights*. In cattle, sheep, and goats, the left lung consists of two lobes; the right lung may possess four or five lobes. In these animals, also, the anterior lobe of the right lung receives an independent bronchus from the lower part of the trachea. This arrangement is not found in the horse. In pigs either two or three lobes may be found on the left side, and three or four on the right.

In the horse the lungs consist of a left anterior and a posterior primary lobe, with an additional pyramidal lobe.

Pleura and Peritoneum.—These thin coverings of the lungs and abdominal organs are frequently the sites of tuberculous deposits and inflammatory adhesions. The practice of stripping either pleura or peritoneum in order to obliterate traces of disease is referred to elsewhere.

Tongue.—In cattle the tongue is *pointed* at its tip, and very rough on its upper surface on account of the presence of the filiform papillæ, which incline backwards. In cattle one will find twenty-four circumvallate papillæ, twelve on either side of the middle line. The tongue is frequently marked with black spots. In the horse the tongue is *square-tipped*, smooth, never shows black spots, and possesses but few circumvallate papillæ. In the ox the os hyoides found in the wind-pipe or trachea is composed of nine segments; in the

horse there are only five segments. In sheep and goats the tongue differs from that of cattle by being hollowed out in the middle line. The pig's tongue has no dorsal ridge. Its surface is smooth, with only two circumvallate papillæ on each side of the mesial line. The dog's tongue is flat, and marked by a median groove. At its posterior surface there is found a cartilaginous body known as the '*lyssa*.'

Uterus.—In cows the womb possesses two horns, and after slaughter should always be examined for signs of disease—*e.g.*, inflammation—especially if the animal has recently calved.

Marrow.—The marrow of the bones of the horse is oily, and has an unpleasant smell. In cattle the marrow is firm, and is odourless.

Lymphatic System.—It is of the utmost importance that the meat inspector should be able to locate and cut down upon the lymphatic glands, which are liable to be the seats of disease. Traces of disease may be so cleverly removed by 'stripping' that it becomes necessary to make a critical examination of the deeper glands. On section, these glands may verify the suspicions of a careful meat inspector.

Lymphatic glands vary in size. They may be as large as a walnut or as small as a sago-seed. They are relatively larger in young than in full-grown animals. A healthy lymphatic gland, when cut into, presents a surface of dirty-white or bluish-grey tint. In pigs the appearance is white. The consistence of lymphatic glands is firm, with the exception of those found in the splanchnic region (abdomen), where they are soft.

Each organ and region possesses its lymphatic glands and ducts, the latter emptying into the thoracic duct.

The **submaxillary glands** drain the cheek, nose, mouth, and tongue. Glands are also found behind the articulation of the jaw. These derive their supply from the ear and base of skull.

The upper cervical or **cranial glands** are to be found on each side of the larynx near the thyroid. The **retro-pharyngeal** glands, situated on the posterior surface of the pharynx, are often affected very early in tuberculosis. Over the upper third of the trachea the **middle cervical lymphatics** are found.

The lower cervical lymphatic glands are to be found at that point where the windpipe enters the chest cavity.

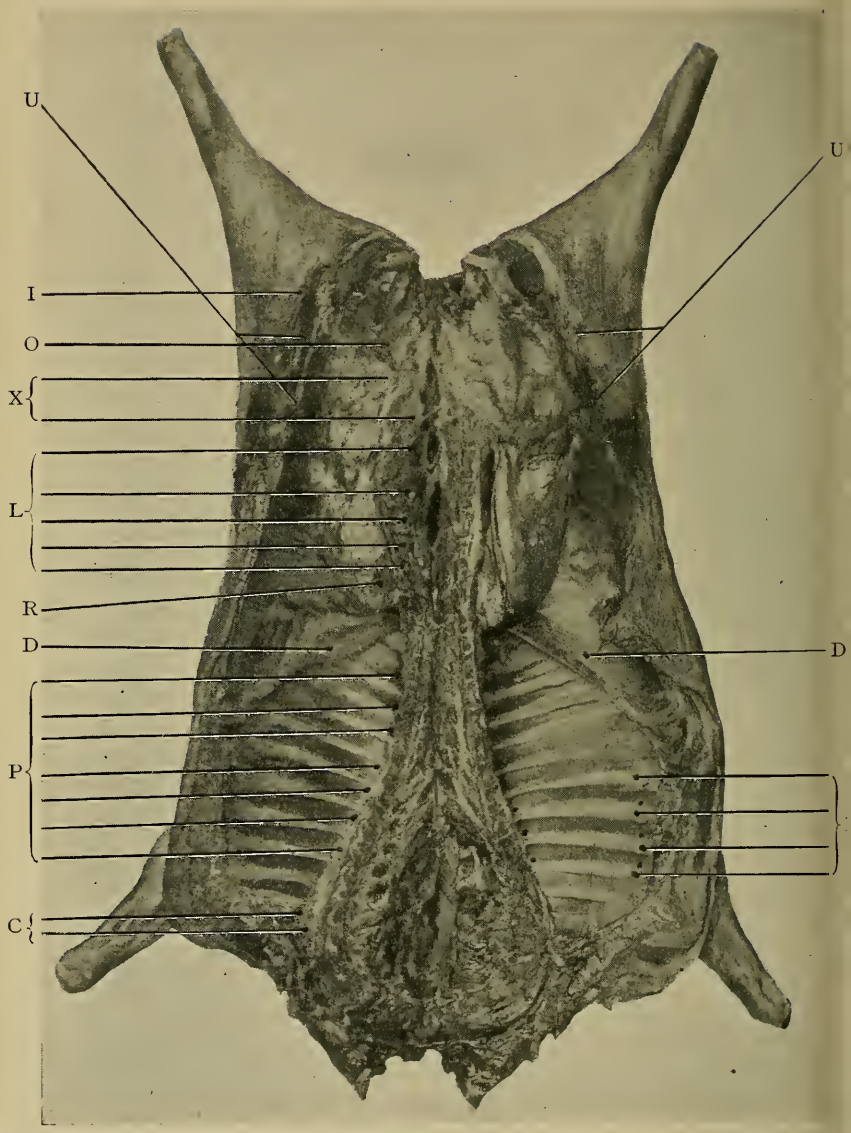


FIG. 28.—CARCASS SHOWING POSITION OF GLANDS, ETC.

U, Site of udder removed; I O, inguinal glands; X, iliac or sacro-lumbar glands; L, lumbar glands; R, renal glands; D, diaphragm (thick skirt); P, glands of superior thoracic wall; C, cervical glands; B, bleached ribs of old animal.

The axillary glands, situated under the shoulder-blade, can only be found after removal of that bone.

The supracervical or **prescapular glands** are concealed by muscles, and are situated just in front of the shoulder-joint. In horses these glands form a small group ; in cattle and in pigs they are single. In fat pigs they are difficult to find.

The external subiliac or **precrural** lie at the anterior border of the tensor fascia lata.

The deep inguinal glands lie in the femoral canal immediately over the femoral (thigh) bloodvessels. These glands are more easily found in horses than in cattle.

The superficial inguinal glands are situated close beside the penis, and at the neck of the scrotum in the male. In the female they are known as the **supramammary glands,** being situated behind and above the udder.

The popliteal glands lie at the back of the knee, and can only be exposed by dissecting down to the joint.

Thorax.—Between the intercostal spaces, and close to the vertebral column, are to be found numerous little glands known as the glands of the **superior thoracic wall.** The **inferior** set of glands is found between the costal cartilages near the breast-bone.

The anterior mediastinal glands are situated over the arch of the aorta ; the **posterior** set beneath the arch.

The bronchial glands are found on either side of the bifurcation of the trachea. They are covered by the aorta, and are embedded in fat.

Abdomen and Pelvis.—The lumbar glands are covered by the lumbar muscles, and situated close to the vertebræ of that region. Portions of this group, situated close to the external iliac artery, are known as the **internal iliac glands.** The **external iliac glands** are more superficially placed. The **sacral glands** are found near the lower lateral border of the sacrum.

Other groups which may demand notice are the **ischiatic, portal, splenic,** and **kidney** glands.

The **mesenteric glands** are situated between the folds of the mesentery, or 'thin skirt,' on the concave side of the intestines. These glands are frequently the foci of tuberculous deposits. In addition to these glands in the pig, others are found at the peritoneal attachment of the mesentery.

CHAPTER VIII

METHODS OF SLAUGHTER

Ordinary method with pole-axe and pithing-cane—The need for accurate aim on the part of the butcher—Other methods—*e.g.*, Greener's shooting instrument—Objections—Neck-stabbing—Transfixion—English patent method—Jewish method—Its drawbacks and points in its favour.

In this country there is neither uniformity in the method of killing nor in the system of inspecting animals. Pigs and cattle are usually stunned before their throats are cut. In the case of sheep and calves, on the other hand, stunning is frequently omitted. This is merely a matter of custom, the humanitarian aspect not being seriously considered by butchers.

Various instruments are employed to effect stunning. In the case of sheep, a small blunt-headed hammer is used, and for calves a club. A wooden mallet is used for pigs. In some abattoirs very large pigs are shot. Cattle are pole-axed by means of an implement pointed on its striking side (see Figs. 29, 30).

When a large animal is about to be killed, a rope is noosed round its neck, or round the bases of its horns. The free end of the rope is slipped through an iron ring usually fixed to the floor of the slaughtering-booth. The butcher and his assistants seize the free end of the rope, and forcibly drawing it through the ring, drag the animal forward until its nose almost touches the ring. In this position the animal is steadied. The butcher then strikes his blow, and, if accurately aimed, the pointed pole-axe crashes through the skull, the animal falling in a heap. A piece of cane is then thrust into the hole made in the skull. The cane passes through the brain-substance and into the spinal cord. This is the operation known as *pithing*. Accompanying pithing there are a few violent convul-

sive movements, then all is still. Thereafter the butcher cuts the vessels in the neck, the large quantities of escaping blood being caught in specially-provided metal receptacles.

Now and again a beginner or a butcher, actuated by bravado or overconfidence, misses his aim. This is a most disgusting sight,

FIG. 29.—KILLING WITH POLE-AXE.

and one is shocked to witness the suffering of the helpless animal as a succession of ineffectual blows is aimed at its head. Butchers are usually expert wielders of the pole-axe, so that such a scene is not often witnessed. In Germany a special apparatus is provided for teaching butchers how to use the pole-axe with accuracy. Not a little suffering would be avoided were such an apprenticeship

made compulsory in this country. Butchers follow a rule of thumb plan of striking the vulnerable point in the skull. This spot may be best defined by drawing lines from the bases of the horns to the opposite eyes, the point at which these lines intersect one another being that aimed at.

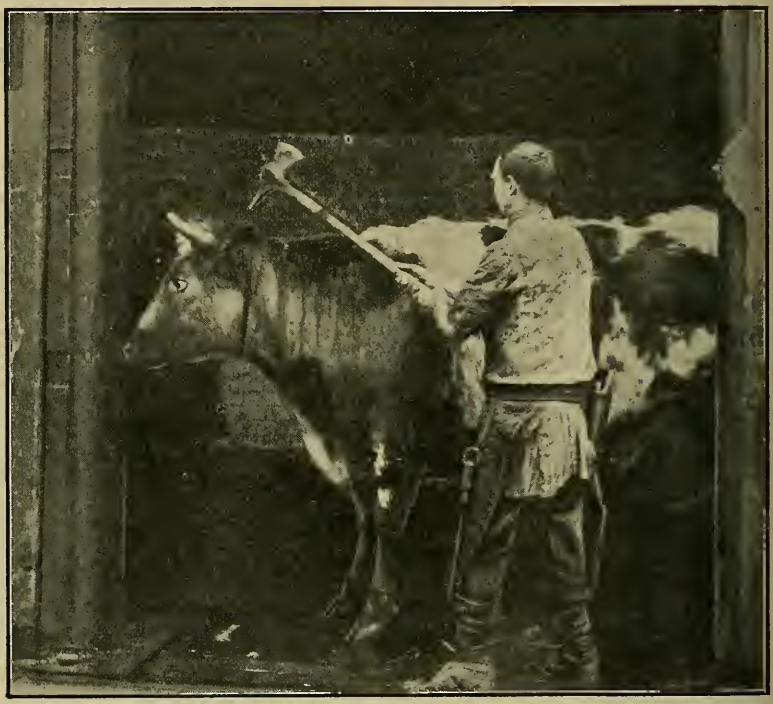


Fig. 30.

Instead of striking the forehead, the butcher hits the animal at the base of the skull. This method is not usually practised.

To prevent mistakes or carelessness in pole-axing, various appliances have been designed from time to time. The best of these is a leather mask which covers the forehead and eyes of the animal to be felled (see Fig. 31). A steel plate forms part of the mask, and in the centre of this plate a metal tube receives a steel bolt with a

pointed end and rounded head. The bolt rests on the vulnerable spot, and when a sharp blow is delivered upon the head of the bolt its pointed end penetrates the skull. *Pithing* follows the withdrawal of the bolt. The objections urged against the use of the mask are the risks involved in fixing it to infuriated animals, as well as the trouble of securing it in position. The bolt is also apt to become loose, and as a result of its point being blunted to rebound off the hard skull when the blow is dealt. Needless to say, these difficulties are not insurmountable.

FIG. 31.—THE LEATHER MASK.
B, The bolt struck by the butcher.

Shooting instruments have also been devised. That most in favour is known as **Greener's shooting instrument** (see Fig. 32). As the name implies, it consists of a rifled barrel with a chamber for holding a small cartridge loaded with a steel-pointed bullet. The animal is roped to a ring as already described, the butcher rests the flat-shaped nozzle of the shooting instrument on the forehead, and with a gentle tap hits the pin of the cartridge-chamber with a wooden mallet. The bullet, if accurately aimed, penetrates the brain, and passes into the spinal cord. The only reasonable objec-

tion that can be advanced against the use of this instrument is that careless application of it, or sudden movements of the animal, may cause the bullet to deviate from its intended course. This may lead to the occurrence of accidents.

Neck-stabbing.—This method is also known as **pithing,** but must not be confounded with the use of the cane. The procedure is seldom followed in this country. It is freely practised in Africa and India. After the head of the animal has been forcibly depressed, a sharp pointed knife is thrust into then ape of the neck so as to

FIG. 32.—GREENER'S SHOOTING INSTRUMENT.

C, Cartridge chamber ; P, pin struck to discharge cartridge.

sever the spinal cord between the first vertebra and occiput. The animal is then bled. Experiments on dogs go to show that, even with neck-stabbing, consciousness is retained after severance of the cord in this way.

Throat-cutting or **transfixion** is frequently employed in this country to slaughter pigs, sheep, and calves. A sharp knife is used to stab the neck and cut the leading bloodvessels. After this has been done the butcher forcibly bends back the head in order to put an end to convulsive movements by breaking the neck. This method has little to commend it.

Occasionally calves are suspended by the hind limbs, and when in that position, are either pole-axed or stunned prior to bleeding. This procedure must also be deprecated. Pigs are dealt with in the same way in some parts of this country; but the invariable practice is to stun these noisy animals before bleeding them.

The so-called **English patent method** is better known on the Continent than in Great Britain. Indeed, it is questionable if many butchers in this country understand what the method means. It was originated in 1838 by a Dr. Carson, and consisted in fixing the animal either in a standing or a recumbent position. Thereafter the chest-wall was punctured between the fourth and fifth ribs, and through the opening made air was forced by a pair of bellows. The animal was thus suffocated by the pressure of air exerted on its lungs. No bleeding operation followed. The rationale of the method was that all the juices were retained in the flesh, which came to be known as 'patent meat.' It was claimed for this method that the meat set sooner, kept longer, and was more tender and nutritious. The process involves cruelty, but is still practised in some continental countries as the British patent system.

Jewish Method—'Schecheta.'—This is distinguished from any other system by the fact that stunning and pole-axing are purposely avoided. When large animals are to be slaughtered, they are thrown on their sides and fixed there, the neck being put upon the stretch by drawing the head back. The butcher, a specially-trained person, severs the throat with the sweep of a keen-edged knife, cutting all the structures down to the vertebræ. Sheep and poultry are also bled in the same way. The Jews claim that their method ensures better blood depletion than when stunning or pole-axing is practised. Their reply to the charge of cruelty is that butchers kill sheep, calves, and sometimes pigs after the Jewish fashion. The strongest argument that can be urged against the Jewish method is that, while forcibly tied down, the animal may, in its struggles, injure itself. The relative virtues of the British and Jewish methods are open to debate. The Jewish butcher's knife is so sharp and the wound so deftly inflicted that little pain can be felt by the animal. In contradistinction, the barbarity of the unskilled butcher who vainly attempts to stun an animal with a badly-directed pole-axe may be cited. It is argued that stunning

may injure only one part of the brain, whereas bleeding induces general anæmia of that organ. It has been proved, in support of the Jewish method, that bleeding induces the loss of consciousness within a space of five seconds. It is also claimed that by the employment of the Jewish method rigor mortis sets in more rapidly, because the sudden depletion of blood leads to a free removal of oxygen from the tissues, the result being that lactic acid is quickly developed, lactic acid formation hastening rigor mortis by the coagulation of myosin. Laboratory experiments support the contention that meat taken from a carcass killed after the Jewish method keeps better than that got from stunned animals.

CHAPTER IX

THE APPEARANCE OF THE MEAT OF ANIMALS UNDER VARYING CONDITIONS

Healthy carcasses—Varying colours of fat—Results of tuberculous adhesions—Dropsical conditions—Flesh of calves—Age and sex of animals—Stripping—Need to see all organs—Bull and ox beef—Septic metritis in cows—Septic cords in new-born calves—Sheep—Goat-flesh—Horse-flesh—Pigs—Diseased meat—Frozen and refrigerated meat—Pickled meat.

In all well-regulated slaughter-houses carcasses are allowed to hang for twelve hours after slaughter. At the end of that time flesh has been given the opportunity to 'set,' when opinion may be finally passed upon it.

In a healthy carcass the 'bark,' or external surface, should be well clothed with fat, which will vary in colour from creamy white to a yellow so intense as to suggest impregnation with bile pigment. Guernsey and Jersey cows, as well as those fed upon oil-cakes and other rich materials, exhibit yellow fat. Cows and oxen fed upon Indian corn and pasture usually show white fat. Well-nourished animals always exhibit large masses of fat, in which the kidneys are embedded. The pleura, peritoneum, and pelvic cavities should also be well studded with adipose tissue. When the pleura are well covered with fat, the appearance may be mistaken for the lymph exudate seen in tuberculosis. This fact is mentioned in order to prevent possible error.

In healthy carcasses the ribs should be pink and free of adhesions. When the lungs and pleura have been seriously involved by tuberculosis, adhesions may be so extensive and strong that in the act of pulling away the lungs portions may be left adhering to the chest wall. The appearances presented by such a morbid con-

L of C.

dition will at once attract attention. Healthy meat should possess a sweetish odour. The muscle substance should be firm, florid, and elastic. It should also be mottled or marbled by an intimate admixture with fat. Good meat should never be too moist. When fluid drains from the muscle or connective tissue of a suspended carcass, suspicion must at once be turned to dropsical conditions, usually found associated with cardiac lesions.

It is to be observed that frozen meat when thawing is wet on

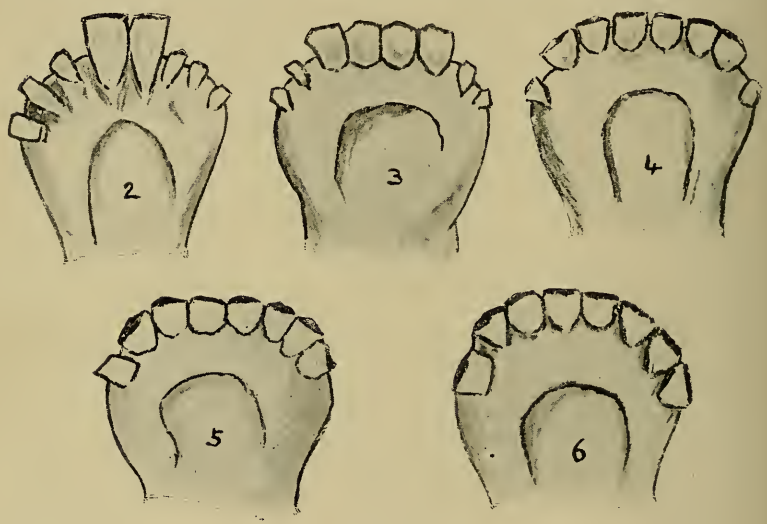


FIG. 33.—DENTITION.

Ages 2, 3, 4, 5, and 6 years, showing the gradual replacement of temporary with permanent teeth.

the surface. This appearance alone does not warrant condemnation of the meat.

Emaciated and pallid flesh which is over-moist suggests an examination of the kidneys, which may be enlarged. When the flesh is dark, one may find the kidneys dark and congested.

In young and in well-fed animals the muscles, after exposure to the air, will show a bright red colour. Dark flesh suggests the presence of inflammatory conditions.

In calves the flesh is of pale red colour, and of soft consistence, the fat being tallow-like. In new-born calves the flesh —*slink veal*—is pale and watery. If the calf has been still-born,

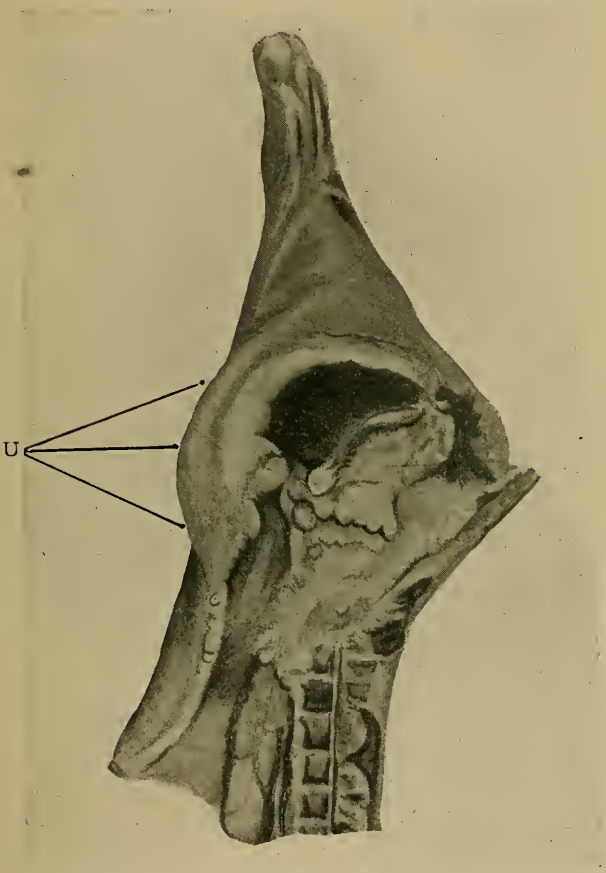


FIG. 34.—QUARTER OF HEIFER.
U, Smooth section of udder.

its lungs will not have been inflated, and its flesh soon turns sour.

In old animals the flesh is coarse, dry, and stringy. When, after

section, the flesh presents no fatty marbling, one suspects either poor condition of the meat or old age of the animal as the causes. Pale muscle substance in adult animals suggests poverty, especially if fat be deficient.

Age and Sex of Carcasses.—It is not always easy to state

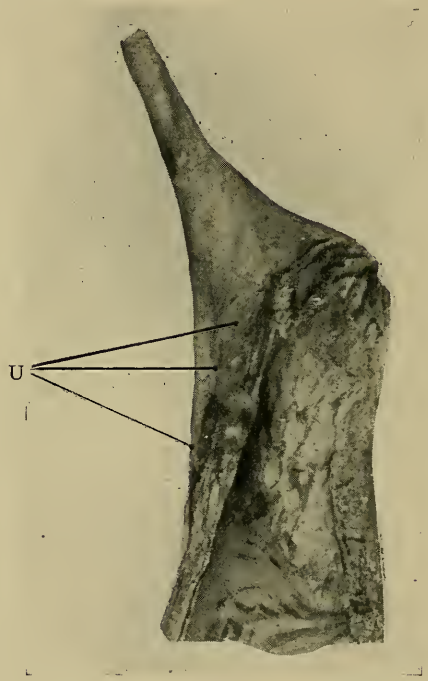


FIG. 35.—QUARTER OF COW.
U, Site of udder removed.

the exact age of animals unless one be thoroughly conversant with dentition—that being the veterinarian's best guide (see Fig. 33). Generally speaking, the joints and bones are the next best indices. In young animals the gristle (cartilage) is more conspicuous than it is in older animals ; also, the bones are more vascular and porous than those of older animals. The vertebræ of young animals are softer, more porous, and more pink in colour

than those in old animals. The same description applies to the appearance of the pelvic bone.

A *heifer* is a young cow that has not had more than one calf. The term *maiden heifer* explains itself. When a maiden heifer has been slaughtered and its carcass suspended for inspection, its udder will appear like a smooth, round prominence of fat, which must not be mistaken for the irregularly-shaped mass of scrotal fat found in oxen (see Fig. 34). On section, the udder of a maiden heifer presents fat. After a cow has had one calf, the udder is more prominent—not so firm as that of the maiden heifer, but still mainly comprised of fat. After the second calf, the udder becomes more pendulous and spongy.

It is well to keep in mind the possibility of fraud in connection with cows' and heifers' udders. For instance, after a cow's udders have been removed, the edges of skin may be pulled together when still warm, to imitate the appearance presented by a heifer's udder. Also, a heifer's udder may be so puckered together as to simulate the irregularity of cod-fat.

It is invariably the practice of butchers to remove the udders of cows before suspending their carcasses (see Fig. 35). When asked to define the sex of a carcass so exposed, the triangular area left by the removed udder on each side must be looked for. In oxen the pizzle and large amount of cod-fat will be noted (see Fig. 36). In bulls, the cod-fat is relatively small in amount, the pizzle being seldom left *in situ*. If present, it is large, as is the erector muscle. In the course of examining carcasses at the slaughter-house it is well to accustom the eye to the appearance presented by stripping. When a carcass is still warm, stripping, or peeling off of the pleura from the chest wall is comparatively easy. To detect stripping without first examining the convex side of the diaphragm is not always easy, since to conceal the fraud the trickster smears the stripped surface with a cloth dipped in warm water, or a sponge dipped in bloody water. Fat rubbed over the denuded surface will also tend to obliterate all traces of interference. But if the diaphragm be lifted and its edges carefully examined, the bared muscle fibres will be revealed, the muscle having been stripped of its adhering pleural membrane. Stripping is invariably resorted to to remove pleura exhibiting tuberculosis. Poorly-bled animals,

or those that have suffered from inflammatory conditions of the lungs, now and again exhibit intrathoracic post-mortem appearances which the butcher attempts to obliterate by means of

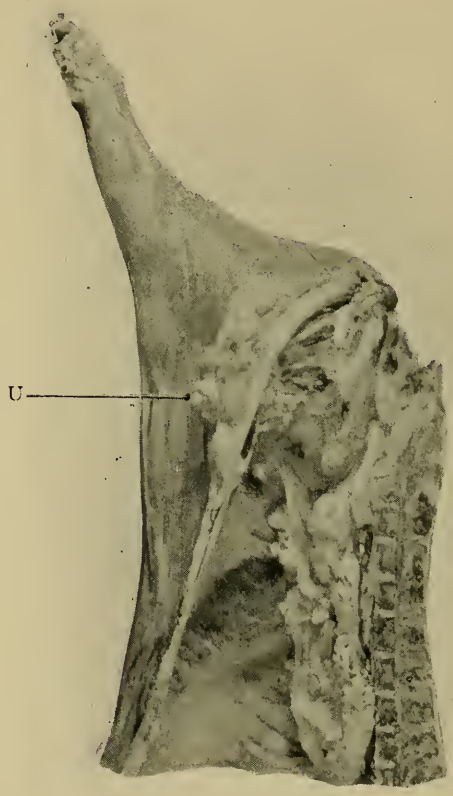


FIG. 36.—OX QUARTER.
U, Large deposit of scrotal fat.

stripping. On no account should a stripped carcass be passed by the inspector.

In examining a carcass, every organ must be available for the scrutiny of the inspector, who will only be acting within his rights

if he refuses to pass a carcass the internal organs of which have been destroyed or concealed. If a carcass be above reproach, there should be no need to fear any examination at the hands of the meat inspector.

Bulls are not frequently met in the slaughter-house, the majority when young being castrated, and subsequently specially fed, ultimately to appear as ox-beef. An imperfectly-castrated bull is known as a 'stag.' The 'stag' and bull differ from the ox in possessing larger pizzle, stronger erector muscle, and less cod-fat. The pelvic bone is much more massive, and, as compared with the ox, the kidney-fat is less in amount. The same may be said of the amount of fat covering the external surface of the carcass of bulls. In well-fed ox-beef, a good and abundant deposit of fat is invariably present. Generally speaking, the carcass of a bull is, in respect to muscular development and bony structure, much more massive than that of the ox. This massiveness is particularly noticeable in the thick neck and broad shoulders of the bull. When a bull has reached the age of nine or ten years, its flesh is very harsh and coarse. If the carcass of a young bull be suspended for inspection, some care will have to be exercised in differentiating it from that of an ox. The fat of a young bull is more abundant than in the older animal, and whiter in colour than that found in oxen.

Fresh, well-fed ox-flesh has the characteristics of meat already referred to. Bull beef is of an indiarubber consistence, and has no marbling in the fat. The brisket (sternum) beef of the bull is coarse and dark as compared with that of the ox or cow.

Young cows, by reason of their ultimately proving very profitable as dairying stock, should, when brought to the slaughter-house, be carefully examined. The appearances of young animals have already been described. As regards older animals, the bleached-looking appearance of the ribs, with their poor covering of fat, is characteristic. This bleaching is found in cows aged six years and upwards. Old cows show projecting shoulder-blades, with hollow spaces on either side of them. The breast-bone in an old cow is narrower than in either the heifer or ox. Old cows yield coarse dry beef, with defective fatty marbling. The fat of old cows is usually of a yellow colour, but this feature alone must not be

held to be characteristic, since, as has already been said, feeding may, and does, exercise its influence upon the colour of adipose tissue.

Sheep.—The flesh of sheep is not so red as ox-beef, and the fat is always white. Tubercle in sheep is seldom seen ; therefore the chance of meeting with stripping is remote. A condition known to butchers as *false tubercle* is frequently met with. It does not necessitate condemnation. The abnormality is due to the presence in the lungs of *Filaria strongylus*, to be referred to in another place. The *mackerel back* of mutton is characteristic, this alternate red and white marking being always noticed in well-fed sheep carcasses suspended for inspection. It should be stated that mutton in a frozen condition is imported in large quantities from New Zealand and Australia. Mutton also comes from Germany, but it is chiefly with the home-fed article that the student is concerned.

The ram, or ' tup,' must be differentiated from a wether sheep. the latter name being given to castrated lambs. In the former the pizzle is thick as compared with the very thin organ found in wethers. The neck, or scrag, is also much more massive than that of the wether. The butcher, by removing the scrag, may try to conceal the sex of the animal.

The ewe, or female sheep, if old, shows inferior meat. The carcass is lean, looks ill-fed, and there is little fat deposited round the kidneys. The skin is of a drab colour, and the flesh dry. It is doubtful if the carcasses of old ewes showing the foregoing characteristics, with veined backs and bleached joints, should be passed as fit for human food.

Goat-flesh is darker in the colour than mutton. It has a characteristic and unpleasant odour, the flavour of the flesh being likewise disagreeable. This odour is most notable when heat is applied to the flesh. When viewing the carcass of a goat, one finds the back greatly arched, with the skin darker in colour than that of sheep. The bones of the limbs are also thinner than those of the sheep.

Horse-flesh.—It is not often that one has the opportunity of inspecting horse-flesh. On the Continent, horse-flesh shops are more in evidence than they are in this country. The sale of such

flesh in this country is regulated by a special Act of Parliament. From Leith large numbers of old horses are regularly shipped to the Continent, but the burgh veterinary inspector only permits animals free from evidences of disease to depart.

The flesh is coarse, dark, and greasy to the feel. The fat is yellow, soft, and has a decidedly unpleasant taste. After the lapse of twenty-four hours the flesh possesses a distinctly soapy feel, the odour being more pronounced and of a sickly character. The bones of a horse are more massive than those of the ox, and the marrow-fat is of a liquid consistence. Under the heading of 'Anatomical Considerations' other features of difference between the carcass of a horse and ox have been detailed.

Pigs.—In pigs the colour of the flesh varies between red and a pink. There is an abundant deposit of fat between the muscles, which are of a fine texture. In old hogs the meat is darker, there is less fat, and the meat, while fresh or when being cooked, gives off a faint odour of urine.

Diseased or Inferior Meat.—A practical familiarity with the appearances of healthy carcasses will best enable one to institute comparisons when called upon to examine suspected meat. Dark flesh, if harsh and dry, is quite unsuited for sale or consumption. Flesh very dark on section, the result of inflammatory lesions, is also unfit for human food. The internal organs and adjoining parts may be red and congested, suggesting inflammatory mischief. The external surfaces, when exhibiting dark patches or large areas of bloody discoloration, indicate stasis of blood due to the position assumed by the sick animal. The cause of the decubitus must be ascertained in order to arrive at a satisfactory conclusion as to the fitness or otherwise of the flesh for human food. Discoloration may be due to accidental bruising or cruelty on the part of drovers. Certain diseases also exhibit signs similar to bruising—*e.g.*, anthrax. In the pig, red or blue patches point to the presence of swine fever. After long and lingering illnesses a dropsical condition of the flesh may be found. Dropsy is also associated with heart lesions. With the characteristic appearance of carcasses affected by tuberculosis the student will soon grow very familiar, since the greatest proportion of carcasses condemned are affected by this disease. In the case of 'piners'

(chronic tuberculous cows), the animals are hide-bound, thin and scraggy, and their flesh harsh, dry, and showing neither juiciness nor admixture with fat.

Putrid flesh is readily detected. When suspicion is directed to meat tainted by the use of drugs—it may be aloes, turpentine, camphor, ether, or castor oil—the forefinger or a knife-blade should be plunged into a fleshy portion of the carcass and the sense of smell employed as a guide. Severe purgation of animals—a frequent expedient in cases of doubtful diagnosis—causes the flesh to be soft and watery.

Cows that have died of *puerperal metritis* are not infrequently met at the slaughter-house. In these animals the uterus must be examined for the detection of foul-smelling, bloody matter or pus. When the abdominal *muscles* are *discoloured* and *dirty-looking*, suspicion must turn to the probability that the animal was bled as a last resort—in other words, that the animal was at the point of death when killed. In anthrax carcasses this appearance of the abdominal muscles is noteworthy. When young calves are brought to the slaughter-house, the umbilicus ought to be examined for septic mischief, due to imperfect treatment of the cord after birth. Tuberculosis in pigs is not common, but evidences of it may be found in the vertebral column and sternum. *Cysticerci* may be observed in the diaphragm, tongue, cheek, intercostal or pectoral muscles. It is only by the aid of the microscope that one can detect the presence of *trichina*, the pillars of the diaphragm being usually selected for examination.

Frozen Meat.—Frozen must not be confused with refrigerated meat. Frozen meat comes from Australia, New Zealand, and South America. When exposed in butchers' shops this variety of meat is thawed. The flesh, owing to the diffusion of blood-colouring matter through it, is very pink, and, by reason of the process it has undergone, moisture oozes from the flesh. After standing some time the surface becomes dry and dirty-looking; but if this layer be cut away, the underlying flesh exposed will be quite watery. The fat of frozen meat is very white. Should the inspector doubt the quality of this variety of meat, he should cut into the hip-joint. Signs of commencing putrefaction may be detected in this region, especially if freezing was commenced before

the carcass was quite cold. This class of meat is not so much sought after as refrigerated beef.

Refrigerated meat, which comes chiefly from North America, is often erroneously called frozen beef. Specially-constructed vessels have been built to cope with this increasing traffic, which, be it said, has done much to reduce the revenue returns from slaughter-houses in this country. The meat, enveloped in thin canvas coverings, is suspended in refrigerating chambers, through which currents of cold air are propelled. The temperature is maintained at a few degrees above freezing-point. The object is to avoid actual freezing, so that putrefactive changes may be obviated.

During warm weather refrigerated meat quickly putrefies. One accordingly finds, in large towns especially, that the butcher leaves his stock in the refrigerating chambers, if there be any available, until it is actually required. If the shanks of the carcass can be examined, one may pick out refrigerated meat by the marks of bruising on the limbs caused by the chains employed to suspend the animals during slaughtering operations. In other respects the flesh of the carcass is pink, as also is the gristle about the joints. The external genitals are invariably removed. The surface is cold, stiff, and damp—'sweaty.' Where a section of the meat is made, one notices that the fat is pink, and not white. This is a distinguishing feature between home-fed and American meat. The escape of meat-juice is responsible for this colouring of the fat. The flesh of refrigerated carcasses is of a brick-red colour, as opposed to the rosy hue of the home-fed product.

Pickled or **salted meat** is frequently exposed for sale; and when the pickling has been carelessly performed, the flesh rapidly decomposes, decomposition manifesting itself by mouldiness and a sliminess of the flesh. If, as sometimes happens, the meat when pickled was none too fresh, putrefactive changes may be detected by either cutting deeply into the mass or by probing. In the latter method the sense of smell might detect any disagreeable odour. In cases of doubt it is always advisable to cut into a joint or down to the bone to make certain that decomposition has not set in. If pickling, for preservation, be aided by the addition of formalin, boracic or salicylic acid, the meat should be seized and condemned as being unfit for human food.

CHAPTER X

PRESERVATION AND STORAGE OF MEAT

Arrangements possible in connection with abbattoirs—Drying, Refrigeration, Sterilization—Chemical agents—Dangers of imperfect cooling with unsuitable materials—Types of cold stores—Ice-making.

EVERY modern slaughter-house ought to have a cold store attached to it. During the warmer months of the year, when meat does not keep well, such a place will be freely used by butchers, fishmongers, poulterers, egg and butter merchants. Attached to every cold store ice-making plant is invariably fitted. Hotels, fish-merchants, public institutions, and steam trawlers requiring to be at sea for days at a stretch are also supplied with ice for the preservation of the captured fish.

In some large towns the butchers combine to erect and equip cold stores, usually placed conveniently near slaughter-houses. This plan has been adopted by the butchers in Edinburgh.

Possessed of an efficient cold store, the butchers are indifferent to climatic changes. Stored carcasses may be drawn upon as the occasion demands, and little meat will go to waste in shops where it would be exposed to heat and aerial contamination. Another great advantage in favour of a commodious cold store is that its existence obviates congestion at the slaughtering-booths. As soon as they have been passed by the responsible inspector, carcasses can at once be taken to the cooling-rooms. Newly-killed meat, as is well known, is tough and hard. This is likely to prove an objection during the warmer months of the year, when meat must be consumed soon after slaughter. By keeping it in a cold store the quality of the meat is improved, since longer time is given for the formation of lactic acid in the tissues. In this connection it is

interesting to know that it is a common practice among cooks to sprinkle vinegar, cream, wine, or whey over steak to imitate the physiological formation of lactic acid. This renders the steak much more tender if, especially after being sprinkled, it be well pounded.

Frozen and refrigerated meat could not be imported in such quantities to this country did cold stores not exist. Artificially-cooled meat quickly decomposes if exposed for sale during warm weather. This class of meat must therefore be kept at low temperatures until required for consumption.

The Preservation and Storage of Meat.

The following methods are employed for preserving meat :

1. Drying.
2. Exposure to cold.
3. Heat.
4. Chemical agents.

Drying.—The preservation of meat by drying has been practised for many years by American backwoodsmen, bushmen in Australia, and Boers. When about to set out on long journeys, in the course of which fresh meat may not be readily procured, this method of preservation has much to commend it, though the nutritive value is lessened. After cutting it into long strips, the meat to be preserved is deprived of its blood contents and all tendons removed. After maize-flour and salt have been well rubbed into the strips they are suspended in sunshine until they become flexible and dry. Meat so prepared is known in South Africa as ' biltong,' and in America as ' pemmican.' The secret of preservation is that a dry atmosphere is necessary, damp and moisture encouraging putrefactive changes. In Scotland dry atmospheres are taken advantage of in many farm and cottar houses, from the rafters of which such articles as braxy mutton, hams, etc., are suspended. If peat fires are used, the smoke from the peat gives the necessary brown colour to the skin of the ham. In ham-curing establishments like methods are followed, but on a more elaborate scale. After the hams have been trimmed and perhaps treated with boric acid or a special brine, they are suspended in a tightly sealed chamber, and smoked by burning straw, etc.

Exposure to Cold.—This is one of the most effective and most generally used methods of preserving food-stuffs of all kinds. The mere application of a cold temperature, however, is not in itself sufficient. The atmosphere must be free from moisture. If one were to pack ice loosely round a carcass in one instance, and in another to pack the ice so firmly as to exclude air, preservation by the former method would be very uncertain. Micro-organisms will grow very readily in a damp, though cold, atmosphere ; indeed, the health official must not be satisfied by the mere assertion that the meat was preserved in ice. He must ascertain for himself how preservation is being conducted. Ptomaine-poisoning has been known to occur as a result of consuming meat that had been kept in ice in an unsuitable place, and under unfavourable conditions. Another very important fact from the health official's standpoint has reference to the quality of the ice used. When ice is procured from cold stores established for making ice, one will be more confident that the product will be pure, since the public water-supply will be used. When, however, natural ice collected from ponds, streams, and ditches is utilized for preserving food, doubts may arise. Any micro-organisms in the water from which the ice has been the outcome will find a suitable soil on fish, poultry, meat, etc. Ptomaine-poisoning has been traced to the eating of fish kept on ice taken from filthy places. More than once it has been necessary to enter fried-fish shops, seize fish preserved in tubs filled with dirty water kept cool by ice of unsatisfactory quality, the fish being slimy, limp, soft, and evil-smelling. Decomposition had, in short, been established, despite the presence of liberal quantities of ice. It is necessary to remember that the *Bacillus typhosus* retains its vitality even though the water containing it be at freezing-point.

Heat.—To preserve food by this means necessitates the application of heat at boiling temperature (212° F., or 100° C.). To render meat or food of any kind sterile (free from living germs) cooking at boiling temperature must be prolonged. It is this prolonged boiling of milk which is believed to interfere with its nutritive qualities. In the preparation of tinned meats effort is made to secure permanent sterility. This can only be achieved if, after the meat is sterilized, air is entirely excluded from it, exclusion of air being made

certain by hermetically sealing such articles of food as tongues, fish, in tins, etc.

When tinned meats are not perfectly sterilized, the germs remaining alive are capable of producing such changes in the food as will give rise to serious forms of poisoning among consumers, ptomaines developed by the germs being the poisonous elements.

To be thoroughly effectual as a process, sterilization consists of repeated raising of the treated article to the boiling temperature. The reason for adopting this practice is that germs which may escape one treatment are destroyed by a second or even third application of boiling heat.

Chemicals.—Reference has elsewhere been made to the unsatisfactoriness of this method for the preservation of foods.

Types of Cold Stores.—The most economical and simple cold store is that in which ice is packed in one room while the articles to be preserved are placed in another. In designing such a store, it is necessary to ensure that a current of cold air shall flow from the ice-room to the other. The room in which the ice is kept must be the larger of the two, and be placed on a higher level. In both rooms the walls must be double and hollow. The cold air from the ice-room forces the warmer air in the meat-chamber upwards through openings in the wall near the ceiling. This type of cold store is economical to erect and maintain. Objection has, however, been urged against its continued use, on the ground that the wood-work of the ice-room, being moist, becomes a haven for micro-organisms, which may pollute the atmosphere of the store. This objection is easily met, since wood-work can be eliminated, and if ice of good quality be used, dangerous bacteria are not likely to be present. Also, the air-currents in such a type of cold store are so sluggish that micro-organisms could not be readily wafted from one room to the other. Again, the surfaces in the ice-chamber being moist, the germs will cling to them.

The most potent objection is that the air-currents are rather sluggish; consequently the circulating air will lack the necessary dryness. Damp air, as has been indicated, is a real objection in cooling-rooms. The provision of a system of air-propulsion would help to overcome this objection, and so permit the continued use of a simple method of cold storage. Stores of this type are dependent

upon a regular supply of ice; accordingly, with the progress of time ice-making factories with cold-storage accommodation are being provided.

In a work of this kind it cannot be expected that a detailed description of a cold store can be given. Moreover, a visit to a cold store and ice-making factory will teach one at a glance how the industry is carried on. A written description would give but a faint impression of the substantial design of the thickly-walled compartments with their accurately fitting and massive doors; the powerful engines which circulate the cooling solution round the tanks containing the water to be frozen, and propel the fans for driving the chilled air through the many cold-storage rooms.

CHAPTER XI

THE DISEASES MOST COMMONLY SEEN IN THE ABATTOIR

The value of qualified meat inspectors.—The correct method of examining carcasses—The diseases that are to be looked for—Tuberculosis and the lack of uniformity in dealing with it—The recommendations of the Royal Commission on Tuberculosis—The various ways in which tuberculosis may reveal itself—Tricks of low-class traders—The Freibank and clearing-house, and their value—Anthrax: its cause and method of spread—Malignant pustule and woolsorters' disease — Duties of the official—Swine fever—Cattle plague — Pleuro-pneumonia — Swine erysipelas—Contagious pneumonia — Urticaria — Braxy — Louping-ill — Foot and mouth disease—Malignant catarrhal fever—Actinomycosis—Black-leg—Glanders and farcy—Puerperal metritis—Milk fever—Parasitic diseases.

BEFORE proceeding to describe the diseased conditions met at the slaughter-house, some preliminary considerations regarding the inspection of carcasses themselves may not be without interest. As carried out at many abattoirs in this country, the system of inspecting meat is very unsatisfactory. The want of uniformity in the methods followed is one reason for saying so; the other is the employment of unqualified and unskilled inspectors.

It may be laid down as a general principle that the opinions of unqualified meat inspectors should invariably be reviewed by veterinary surgeons. An unqualified meat inspector who has but a superficial knowledge of his work, and has given the subject little or no study, may be expected to give very elementary reasons for adopting any particular line of action with regard to diseased or suspected carcasses. To repose trust in such a person is not only wrong, but very unfair to the citizen who is entitled to be protected by careful and systematic methods of food inspection.

An unqualified meat inspector who has been trained as a butcher may, as the result of constant practice and familiarity with the

normal and abnormal appearance of carcasses, be reasonably armed with powers to detain carcasses for purposes of inspection, but no more.

In every case, the routine adopted should be as follows : As soon as a carcass reveals diseased conditions it (including the viscera) should be immediately removed from the slaughtering-place to another booth set aside for the retention of suspicious meat. In this booth the veterinary surgeon, or qualified meat inspector, will deliberately conduct his inspection in the manner suggested by Ostertag, as follows :

Cattle—1. *Skin.*—Examine for the presence of wounds, bruising, emphysema (air under the skin), anthrax, actinomycosis, larvæ, congestion ; when the latter exists on one side only, one is led to suspect that the animal lay in that position during its illness. This is known as the ' decubitus ' of the animal.

2. *Head.*—(1) The outer aspect must be examined for the presence of abscesses, ' lumpy-jaw ' (actinomycosis), tumours, etc.

(2) The nostrils, lips, hard gums, and back of the throat to be examined for presence of evidences of foot and mouth disease and rinderpest (uncommon in this country).

(3) The tongue should be felt for hard knots (' wooden tongue '), actinomycosis, and examined for foot and mouth disease.

(4) The muscles of mastication must be incised to detect the presence of cysticerci.

(5) The upper neck (cervical) glands and throat (laryngeal) glands should be incised to detect the presence of actinomycosis and tuberculosis.

3. *Liver.*—This organ must be felt by the fingers, and the portal vein opened for the detection of inflammation, degeneration (fatty), parasites, tumours, tuberculosis, and cysts (hydatids). The bile-ducts should be opened and search made for flukes.

4. *Heart.*—The covering of the heart (pericardium) should be opened. Then the chambers of the heart must be examined by cutting into them. The walls (muscles) of the heart may show degeneration, hæmorrhages. Needles, hairpins, etc., may be found impacted in the walls of the heart. Cysticerci may be found, and endocarditis (inflamed condition of the internal lining of the chambers and valves of the heart) may be detected.

5. *Lungs.*—These must be carefully felt and opened up for the detection of tuberculosis, inflammation, strongyli, etc. The bronchial and mediastinal glands, at the roots of the lungs, must also be examined and incised for the detection of tuberculous deposits.

6. *Spleen.*—This should be felt and opened for evidences of disease such as tuberculosis, swelling, etc.

7. *Kidneys.*—To prepare these for complete examination, the fat surrounding them should be pushed aside while the carcass is still warm. If this be not done, subsequent separation of the solidified fat may be difficult. Parasites, signs of inflammation, with the formation of matter (pus), as well as tuberculosis, may be found when these organs are cut open.

8. *Stomach.*—This organ must be examined externally and internally for the detection of congestion, tumours, parasites, etc.

9. *Intestines.*—These should be examined for the presence of inflammation, worms, and, in the case of pig typhoid, ulcers.

10. *Mesentery* (*Thin Skirt*).—The mesentery and its glands should always be carefully examined, since tuberculosis is frequently found in them.

11. *Omentum.*—This is examined for the presence of tuberculosis and hæmorrhages.

12. *Uterus.*—Must be cut open in search of inflammatory changes.

13. The *pleura* (lining the chest wall and covering the lungs) must be examined for the presence of tuberculosis. The *diaphragm* (*thick skirt*) must be lifted to detect attempts at stripping of the pleura. The *peritoneum* (internal lining of the abdominal cavity) is also to be examined.

14. The *sternum* (breast-bone), *pelvis* (haunch bones), and *backbone* are also to be inspected for the presence of fractures, discoloration, and tuberculosis.

15. The *udder* must be cut open to detect the presence of tuberculous deposits. The glands behind the udder (*supramammary glands*) must also be incised.

Calves are similarly examined.

Sheep.—In these animals attention may be directed to the lungs for the presence of strongyli, and the liver for the existence of flukes in the bile-ducts.

Pigs.—Cysticerci are to be searched for in the tongue, heart, and diaphragm, also in the intercostal, cervical, masticatory, and laryngeal muscles. The bases of the lungs frequently reveal the presence of strongyli. In suspected cases of pig typhoid the intestines are to be carefully examined for the detection of ulceration. Round worms may be found.

In every well-regulated slaughter-house carcasses of animals that have been inspected and passed should be stamped before being removed by the butcher.

Tuberculosis.

Frequent allusions have already been made to the causes that lead to the prevalence of this disease, especially among cows. When he comes to deal with tuberculous carcasses the student will realize how utterly lacking in uniformity are the British methods of meat inspection. In one abattoir the mere trace of tuberculosis in a carcass is followed by complete confiscation; in another only the affected part and the neighbouring glands may be kept back; while in a third instance the lines recommended by the Royal Commission on Tuberculosis (1898) are more or less followed. These recommendations are reproduced.

'TUBERCULOSIS IN ANIMALS INTENDED FOR FOOD.

'We recommend that the Local Government Board be empowered to issue instructions from time to time for the guidance of Meat Inspectors, prescribing the degree of tubercular disease which, in the opinion of the Board, should cause a carcass, or part thereof, to be seized.

'Pending the issue of such instructions, we are of opinion that the following principles should be observed in the inspection of tuberculous carcasses of cattle:

'(*a*) When there is miliary tuberculosis of both lungs. '(*b*) When tuberculous lesions are present on the pleura and peritoneum. '(*c*) When tuberculous lesions are present in the muscular system, or in the lymphatic glands embedded in or between the muscles. '(*d*) When tuberculous lesions exist in any part of an emaciated carcass.	The entire carcass and all organs may be seized.

'(*a*) When the lesions are confined to the lungs and the thoracic lymphatic glands.
'(*b*) When the lesions are confined to the liver.
'(*c*) When the lesions are confined to the pharyngeal lymphatic glands.
'(*d*) When the lesions are confined to any combination of the foregoing, but are collectively small in extent.

} The carcass, if otherwise healthy, shall not be condemned; but every part of it containing tuberculous lesions shall be seized.

'In view of the greater tendency to generalization of tuberculosis in the pig, we consider that the presence of tubercular deposit in any degree should involve seizure of the whole carcass and of the organs.

'In respect of foreign dead meat, seizure should ensue in every case where the pleura have been "stripped."'

Tuberculosis is very rarely encountered in calves. They are killed so young that evidence of infection from a maternal udder, the seat of tuberculous deposit, is seldom seen. The fact that calves, born of tuberculous mothers whose uteri may be involved, show no traces of tuberculosis, tends to disprove the theory of hereditary transmission of this disease. The question of transmissibility of tuberculosis from animals to man has not, for obvious reasons, been settled, though there are not a few authorities who assert that tubercle bacilli taken in the food may and do reach the abdominal lymphatics, to establish in them *tabes mesenterica* (known as consumption of the bowels). It is also believed that the bacilli may, after passage through the alimentary canal, finally reach the lung apices.

A description of the disease as seen in the abattoir cannot adequately convey to the mind the innumerable forms in which tuberculosis may be met. The conditions to be seen can only be learned after repeated visits to the slaughtering-booths have been made. In one carcass there may be an involvement of the retro-pharyngeal (throat) glands alone, this being one of the earliest centres of attack in cattle. In another instance the mesentery, peritoneum, and liver may be affected. A third carcass may, when opened, reveal the existence of pendulous clusters attached to the walls of the chest, the lungs being reduced to cheesy-looking masses. These clusters of tuberculous deposits are known as 'tubers' and 'grapes' among butchers. On another occasion a carcass may be found riddled with miliary tuberculosis, or the liver alone may be attacked. Often only the lungs and mediastinal glands are attacked, and

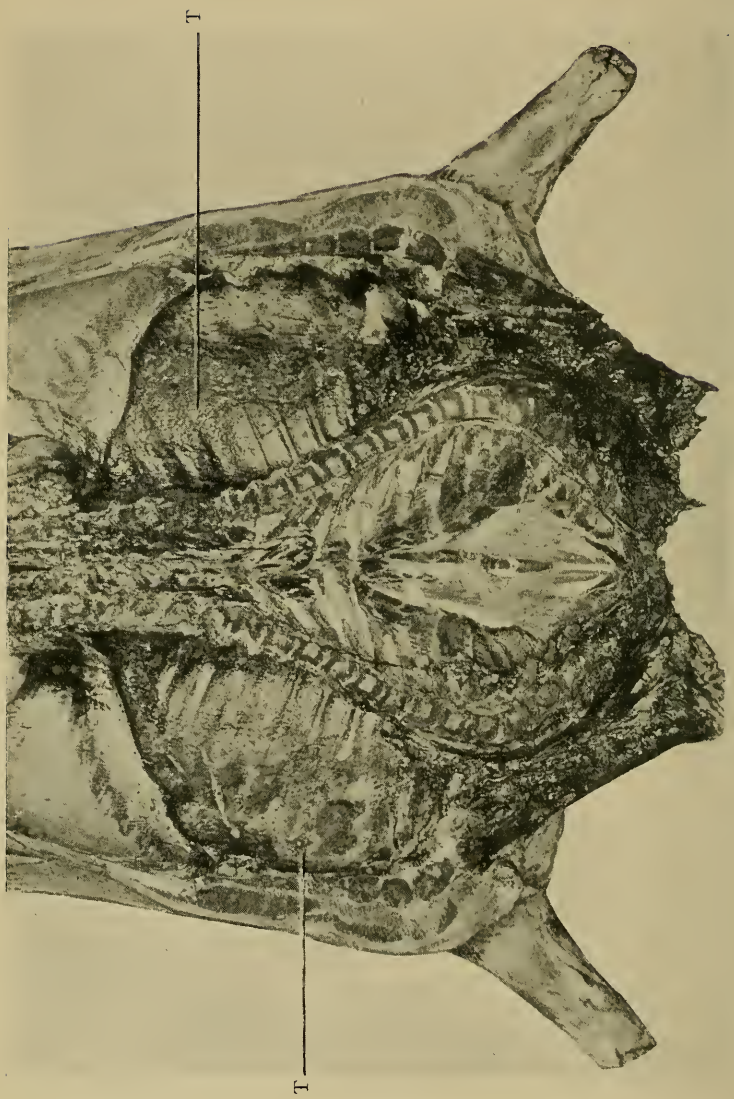


FIG. 37.—COW CARCASS.

TT, Showing extensive deposits of tuberculous disease and lymph exudation on the chest walls. It is such involvement of the pleura which the butcher may attempt to remove by 'stripping.'

usually associated with this involvement is found a fibrinous exudate on the pleural surfaces. Should adhesions have taken place, it may become necessary to tear away the lungs from the chest walls. The udder alone may be the seat of tuberculous disease, the rest of the carcass remaining free. The fact that the poorer classes freely partake of boiled udder demands that this organ must be carefully examined at the abattoir. When a thin carcass is found to be affected by tuberculosis, the meat should not be permitted to pass out of the slaughter-house. Thin tuberculous carcasses, known as 'piners,' are usually those of cows that have lived in some unwholesome cowshed. The flesh is of poor quality, being harsh, dry, stringy, and lacking in the fatty marbling so characteristic of good meat. Old animals always show bleached-looking ribs devoid of fatty covering (see Fig. 28).

A regular trade in old cows is carried on by some classes of butchers. In fact, the thin cow is known in the trade as a 'mincer,' her flesh being destined to be used either for making mince or as a stuffing for sausages. Butchers of repute refuse to trade in such unsatisfactory animals.

The official will always find it advisable to make himself conversant with the market prices of living animals. This information will prove valuable should at any time proceedings be instituted against those dealers who traffic in inferior stock. For example, it will be found that 'mincers' may be purchased for sums varying between £3 and £7. Should a butcher be placed in the witness-box on his defence, the question may be very pertinently put to him: 'Do you consider it possible to buy good wholesome meat at the rate of £4 an animal?' Such a low price is a certain indication that the purchaser was well aware of the risk he ran of having the carcass seized when making his investment.

The following instance affords a good object-lesson to the student: A butcher had for months been trafficking in 'mincers,' and though a prosecution against him failed, the legal proceedings taken put a stop to his practice. This butcher then resorted to the expedient of sending his 'mincers' to be killed and *inspected* at the public slaughter-house. If passed as fit for human food, the carcasses were claimed and removed; if condemned, they were confiscated, without objections being raised, and put into the steam digester.

The lack of uniformity in the inspection of meat, and the imperfect examination of animals killed in private slaughter-houses, must necessarily lead to the consumption of much tuberculous flesh in this country. It is regrettable, therefore, that the recommendations of the Royal Commission are not enforced by statute. They are comprehensive and sufficiently elastic to protect consumer and trader alike. As matters stand, one constantly hears complaints from dealers and butchers that the purchase or sale of animals is, according to the place of inspection, a critical investment. The truth of this contention is manifest when it is realized that the authorities in one town are most drastic in their methods, whilst perhaps those in a municipality not far distant display methods that border on laxity. This anomaly can only be removed by concerted action, and by the adoption of common-sense principles by qualified meat inspectors.

Sheep and goats are seldom attacked by tuberculosis.

Outside the slaughter-house tuberculosis is most frequently seen among fowls. As in the case of cattle, this disease is most common when the fowls have been housed in damp, dark, and insanitary quarters. So virulent does tuberculosis become in some hen-roosts that nothing short of entire demolition or reconstruction of the premises will eradicate the scourge. Far too little attention is paid to the lighting, ventilation, and internal arrangements of hen-roosts and runs.

The establishment in this country of the **Freibank** and the stamping of carcasses would do much to remedy the anomalous methods of dealing especially with tuberculous meat. The *freibank* is a German institution. As has been said, there are many instances where total condemnation of tuberculous carcasses is necessary. On the other hand, many cases are met, especially among well-fed oxen, in which tuberculous involvement is limited to the lungs and pleural surfaces. In every other respect the carcass presents the typical appearance of excellent beef. Some authorities would condemn the fore part of the carcass, permitting the butcher to carry away the remainder. Others would without hesitation condemn and seize the entire carcass. In Germany the *freibank* would be requisitioned to fulfil its useful purpose in the following manner : Having cleared away all evidences of disease, the glands being carefully examined,

the carcass would be either cut into pieces and cooked in an efficient sterilizer, or the meat stamped and sold as inferior. The purchaser is, in fact, made aware that he is purchasing an article of secondary quality. Only the poorer classes are supplied, special care being taken to prevent the supply of hotel-keepers, restaurateurs, and the like. The scheme is designed to assist those unable to buy first-class butchers' meat.

Sentiment alone stands in the way of the institution of the *freibank* in this country. The risk, if any, attached to the consumption of meat taken from a carcass with distinctly localized tuberculous lesions must be infinitesimal. This will be specially true when effective measures are adopted to sell meat that has been carefully sterilized. Objections to the initiation of the *freibank* system in Germany were many, but these have been dispelled by the satisfactory operations of the principle and by its proved value to the poorer classes.

The **Clearing-house** is another necessity from a public health point of view. Under this system it is required that all unstamped or imperfectly inspected carcasses brought into a municipality shall be taken to the *clearing-house* there to undergo inspection. Where many private slaughter-houses exist, or when clandestine slaughtering of animals takes place, the need of a *clearing-house* becomes obvious. It may also be necessary at those ports where large consignments of dead meat arrive from abroad. The chief difficulty in the way of any satisfactory inspection must always be the absence of the organs from the carcass, since without these the inspector is often at a loss to express a decided opinion.

Anthrax.

Anthrax is also known as *splenic fever* and *splenic apoplexy*. In man it appears as *malignant pustule* and *woolsorters' disease*. *Charbon* is the French name for anthrax, its German equivalent being *Milzbrand*. In Siberia the disease chiefly attacks horses as *Siberian plague*. In Australia anthrax is known as Cumberland disease ; in India as *Loodianah*.

The disease is produced by the entrance into the body of the anthrax bacillus, the discovery of which laid the foundation of the

study of bacteriology. The disease is very fatal among horses and cattle, and sheep are very susceptible. Hogs and pigs are not readily attacked.

Infection with anthrax is generally by means of spores, spore-free bacilli being readily destroyed by the gastric secretions. Numerous instances have been recorded where meat taken from animals that have died of anthrax has, after cooking, been eaten either without harm resulting, or with the production of transient illness. While this does not altogether prove the harmlessness of meat infected by anthrax, it indicates that man is not very susceptible to attack.

It is seldom possible to trace infection to its actual source. Several localized outbreaks in Leith, for example, have never had a definite source assigned to them. It has been suggested that anthrax spores may have been eaten with oil-cake and other food-stuffs imported from countries where the burial of animals dead of anthrax was not carried out with proper sanitary precautions. Oil-cake is derived from the crushed seeds of flax grown in India, on the Continent, and in South America. Earth-worms, by casting up spores from improperly buried carcasses, may thus infect the food-stuffs. That anthrax is imported in wool, hair, and hides is pretty certain, the experience of Bradford, Liverpool, and Dundee justifying that conclusion. It is significant, too, that wool, hair, and hides come from those countries where anthrax is common. Anthrax shows a tendency to endemicity in some districts in this country. Another peculiarity displayed by anthrax is that outbreaks seldom are extensive. In the author's experience five different outbreaks have in each instance, save one, been confined to one cow. In the exception quoted two cows were attacked. During the winter of 1904-1905 several districts, widely separated from one another, were simultaneously visited by anthrax. Whether the infecting organism be inhaled or swallowed by animals, it ultimately reaches the blood-stream.

Butchers are now and again inoculated with anthrax, the characteristic *malignant pustule* resulting. It is surprising that butchers escape as they do, accustomed as they are to handle and dissect animals with an utter disregard of consequences. *Woolsorters' disease*, though uncommon, is still encountered among those

who handle hides, wool, and hair. This form of anthrax is very fatal.

The incubation period of anthrax is usually short, being frequently no longer than seventy hours. The quarantine period for infected premises is about twelve days. '*Staggers*' is the name applied to anthrax by butchers and stock-owners, because staggering is one of the first signs of disease noted. It should be observed, however, that the term 'staggers' is also applied to illnesses due to digestive disturbances. Other evidences of attack are found in the fevered state of the animal, its loss of appetite and refusal to take food. It salivates and listlessly hangs its head. The animal is also obviously giddy. It may suffer a good deal of pain and buffet itself about its stall. If seized with illness when grazing, it will roll about and kick, other cows butting it in its death agonies. Evidences of injuries are thus frequently encountered when the carcass is examined. Bleeding from the nose and anus have also been noticed in cows attacked by this extremely fatal disease. The post-mortem appearances are characteristic. After the animal has been skinned, dark hæmorrhagic and gelatinous-looking masses, bearing the appearance of extravasation due to bruising, are noticed over the loins, buttocks and shoulders. The flesh itself is paler than usual, but dark where intramuscular hæmorrhage has occurred, hæmorrhages being a characteristic feature in anthrax.

If an animal be sent to the slaughter-house in a dying state or actually dead, and without a clear history of illness being given, the first warning is sounded by the butcher as soon as he exposes the spleen. This organ is always enlarged in all cattle attacked by anthrax. Occasionally the enlargement is abnormally great, its extent being gauged by comparing an affected with a normal spleen. If an attempt be made to remove the organ, care must be exercised, since the mass is soft and extremely friable. Its contents resemble black-currant jelly. The chambers of the heart are full of very black clots, the pericardium frequently containing bloody fluid. The intestines are transparent-looking in places, greatly inflamed, and red, and, when opened, quantities of semi-clotted dark blood escape. Hæmorrhages may be found in the liver and kidneys, the lymphatic glands being usually congested. When pigs are infected the spleen may not be enlarged, but one finds the throat greatly swollen, together with

internal hæmorrhages. Infection in pigs has invariably been traced to the consumption by them of meat taken from anthrax carcasses.

For purposes of diagnosis blood may be taken from the ear of an infected animal or from its spleen. Mistakes in diagnosis may occur by confusing the **Cadaver bacilli** usually found in carcasses with those peculiar to anthrax. Ostertag lays stress upon this point, since these bacilli coming from the intestinal tract may and do find their way into neighbouring organs, more especially if the animal has lain unopened for twenty-four hours or more. *Cadaver bacilli* form spurious threads. The difference between the two organisms is to be found in the greater length and rounded ends of *Cadaver bacilli*, anthrax bacilli having square ends. Enlarged spleen and rod-like bacilli in the blood may also be found in malignant œdema, petechial fever, hæmorrhagic septicæmia, black-leg, etc.

Duties of the Official.—The task of notifying the existence of anthrax to the Board of Agriculture rests with a veterinary inspector, the appointment of whom is called for under the Contagious Diseases (Animals) Act. The Anthrax Order details the procedure to be followed on the outbreak of anthrax.

As soon as a carcass has been opened and the enlarged spleen exposed, no further dissection ought to be permitted until a microscopical examination of the blood has set any doubts at rest. Should the microscopical examination still leave the diagnosis doubtful, mice or guinea-pigs must be injected with the suspected blood.

Once the diagnosis has been established, the booth in which the animal was dissected must be closed against further operations. All knives and instruments employed by the butchers must be sterilized by boiling, or by being steeped in a strong antiseptic solution—formalin or carbolic acid. Mercury will injuriously affect the steel blades.

It is not always easy, in large towns especially, to put into effect the recommendations embodied in the Anthrax Order with reference to the disposal of carcasses. In connection with some abattoirs, a piece of spare ground is set aside as a burial-place, but such conveniences are not common, and recourse to other methods of disposal becomes necessary. The safest mode of disposal is

afforded by a refuse destructor. When conveying an anthrax carcass for burial or destruction, care must be taken to plug all natural openings, and to envelop the body in a covering dipped in antiseptic fluid in order to avoid the dropping of infected blood by the way. The cart used for the removal of the animal must be subsequently disinfected. With regard to burial, it is necessary to exercise care in the selection of the burial-ground in order to obviate the risk of water pollution, or the infection of pastures by the upturnings of earth-worms, rats, and moles.

Doubt frequently arises regarding the procedure necessary when anthrax breaks out at a dairy farm. When a cow is attacked by this disease, her milk is immediately suppressed. It is rarely necessary to demand the stoppage of milk-supply from the unaffected cows. Section 4 of the Anthrax Order (*q.v.*) directs what is to be done with the milk of 'diseased' or 'suspected' animals. For a period of twelve days the veterinary inspector keeps the infected premises under strict obervation, and should no other cases arise, the place is declared to be free from infection.

Section 9 of the Anthrax Order affords the best guide as to disinfection of the slaughtering-booth, farm, etc.

The other diseases dealt with under the Contagious Diseases (Animals) Act are *swine fever*, *cattle plague*, and *pleuro-pneumonia*. For the sake of convenience, these may be now described.

Swine Fever.

This disease is also known as *hog cholera*, *pig typhoid* or *enteric*, *red* or *blue soldier*, *purples*.

The specific organism of this affection is a bacillus very similar to that found in human subjects suffering from typhoid fever.

Young pigs are most prone to attack, though old pigs do not escape.

The incubation period of the disease is from two to five days. Mice, guinea-pigs, and rabbits fed upon a specifically infected diet died within two to twelve days.

A feature of pig typhoid outbreaks is their liability to recur in particular premises. This is probably due to similar factors to those which influence the endemicity of typhoid fever in certain localities —namely, polluted soil infected by the specific virus. To root out

the cause of recurrence in piggeries one must advocate reconstruction, with the provision of concrete floors, well-paved yards, and sound drainage. The author has heard Professor Williams, of Liverpool, enunciate a theory to the effect that the persistence of pig typhoid in piggeries is due to the presence of infected rats. In proof of his statement, he pointed to the fact that pig typhoid was only eradicated after all rat runs had been dealt with and the rodents exterminated.

When hog cholera attacks a pig the animal becomes feverish, thirsty, prostrate, and refuses all food. At the outset of illness there is constipation, which is invariably followed by offensive diarrhœa. Such bowel discharges contain the germs of the disease, and may give rise to further outbreaks, if allowed to lie about absorbent floors and wood-work. As the disease progresses, the animal becomes very cold. The eyes may be attacked by purulent ophthalmia. About this stage of illness the characteristic skin eruption of red spots appears on the snout, backs of the ears, and anus. Now and again the ears are blue or purple. After death the entire skin may be covered by blotches of red. These are usually isolated from one another, some extensive, others small and well defined. This red coloration has given rise to the synonym, ' red soldier.' If the ears and other parts of the body be marked by purple patches, the name ' purples ' suggests itself. Though this discoloration of the skin should at once arouse the meat inspector's suspicions, the feature is not a constant one. Other signs should therefore be looked for, otherwise the disease may escape notice, especially if sporadic cases arise in a district. Pig typhoid usually runs its course in from five to eight days, but may last longer, when the carcass will be much emaciated.

Upon cutting open the affected animal, the main changes to be found are in the intestinal tract and lungs. The mucous membrane of the mouth may be covered by a diphtheritic-looking exudate, or there may be merely a congestion of the parts. The duodenum and ileum are usually in a catarrhal condition. Lower down the bowel the cæcum, colon, and rectum are either covered over with a diphtheritic-like membrane, or (as in typhoid in human beings) the lymph follicles may be found ulcerated. The similarity of the lesions in the pig and man in the proximity of the ileo-cæcal valve is very

striking. The lungs may be found to be unaffected, but usually they are consolidated, and when cut into are as resistant as liver substance. The picture of acute pneumonia presented is a very striking one, the lungs being almost completely solidified.

The meat of pigs dying of *hog cholera* is quite unfit for human food, and must be destroyed.

The officials called upon to deal with outbreaks of this disease are the veterinary inspector of the local authority concerned and members of the Board of Agriculture. The Public Health Department may assist with adequate methods of disinfection. The occurrence of swine fever may also be the means of enabling the health official to deal with piggeries that are in an insanitary condition.

Cattle Plague (Rinderpest).

This disease has, fortunately, been stamped out in this country, and it is only the dread of its importation that prompts the Government to maintain the embargo upon the importation of foreign cattle.

The bacteriology of *cattle plague* is not known. Cattle mostly suffer, man being immune. During the European wars of last century the armies in the field ate rinderpest meat without any harm resulting.

The lesions found in the disease are confined to the alimentary tract. They consist of patches of congestion inside the mouth, fauces, and the first three compartments of the stomach. The small intestines are similarly affected. The rectal mucous membrane is intensely injected, the redness being broken by greyish lines of diphtheritic-looking membrane. The liver is swollen, the kidneys slightly congested, the spleen being unaffected. Congestion of the lungs with hæmorrhages into the lymphatic glands may be encountered. The flesh has a peculiar odour and a magenta colour. Destruction of the carcass is compulsory.

Pleuro-pneumonia.

This disease has now become very rare in this country. As the name implies, the parts attacked are the lungs and pleura, a

specific micro-organism having been isolated. The seat of attack is usually the left lung.

Red and grey hepatization are encountered at the same time in affected lungs, giving them a marbled appearance. There may be fluid in the chest cavity, the pleura being covered by a thick fibrinous exudate. When the animal is killed during the acute stages of the disease, its flesh is found to be soft and dark, and does not set properly. At the lower part of the chest wall the flesh may be œdematous and boggy, which feature suggests the application of the term ' wet goat ' by butchers.

The meat is not eaten in this country.

Swine Erysipelas.

This is a disease that might be confused with swine fever; accordingly a description of it at this point may not be without interest. The disease is seldom encountered in this country. It attacks adult pigs, as a rule, younger animals being almost immune. The specific organism is a bacillus with rounded ends, and may be recovered from the spleen, bone-marrow, and lymphatics.

Feverishness, loss of appetite, and gastro-intestinal mischief are characteristic symptoms of the more malignant form of the disease. The erythema on the skin is a fairly constant feature, but its appearance may lead to difficulty in differentiating between swine erysipelas and typhoid. The disease in no way resembles erysipelas in the human subject. In the diagnosis between swine fever and erysipelas bacteriology will be of some assistance. The post-mortem appearances in swine erysipelas show heart and liver degeneration, with deposits on the valves of the heart as well as hæmorrhages under the serous membranes—*e.g.*, pleura and peritoneum—with enlarged spleen, which assumes a bluish-red colour. Ulceration is never found in the intestines, but the mucous membrane and lymph follicles are congested. The kidneys are dark and enlarged, and when cut into a bloody fluid escapes from them. Rigor mortis is absent, and putrefaction rapidly supervenes. Such meat is quite unfit for human food.

Contagious Pneumonia of Swine.

This disease is happily unknown in this country. In America it is known as *swine plague*, and in Germany as *Schweineseuche*. The lungs and pleura show signs of inflammation, and the skin may be discoloured. Hepatization of the lungs and lymph exudation on the pleura are found. The meat should not be eaten, though no harm has been traced to its consumption.

Urticaria (Nettlerash of Pigs).

This is believed to be a bacterial disease caused by the eating of putrefying food-stuffs.

The lesions to be found on the skin take the form of diamond-shaped subcutaneous hæmorrhages. These fade as the disease advances. Feverishness, loss of appetite, and constipation are the chief symptoms among pigs.

In Germany the meat is passed on to the *freibank*, and sold from there as ' inferior food material.'

Braxy.

The term ' braxy ' is somewhat indiscriminately applied by shepherds, agriculturists, and others in this country. True *braxy* is an infectious disease most common in winter, young animals being selected for attack. It has been observed that flocks grazing upon poor pastures are most frequently affected. Spore-bearing bacilli, which are believed to be the specific micro-organisms of the disease, have been isolated. These bacilli may be recovered from the organs and inflamed alimentary mucous membrane of infected animals.

The disease runs an acute course. The sheep attacked becomes sick, and, if undetected by the shepherd, lies down and dies. Should a sick animal be observed, it is bled on the spot, so that the flesh may be used by the cottars, since it is principally they who consume braxy mutton. If the animal dies, its body rapidly swells, putrefaction soon following. Death takes place either from suffocation

caused by the excessive distension of stomach and bowels, or from toxæmia (blood-poisoning).

After death the wool is readily detached from the skin. The subcutaneous and muscular tissues are boggy with bloody œdema. The walls of the fourth stomach show dark red spots. The other compartments and the mucous membrane of the intestines may be similarly affected. The serous cavities may contain a bloody serous fluid. The above features apply to the disease known as **red braxy,** the affection being exactly similar to that commonly found among sheep in Norway under the name **brusot.**

Water and **turnip braxy** are dietetic disorders which must on no account be confused with the specific disease so fatal among certain flocks. The mutton of **red braxy** is never exposed for sale. When, however, ailing sheep are detected and bled before death, the mutton is salted, smoked, and eaten as a delicacy by the hillside people in many remote parts of Scotland. When the process of putrefaction has set in prior to salting and smoking, signs of gastro-intestinal catarrh (vomiting, diarrhœa, etc.) may appear amongst the consumers.

Louping-ill.

This is another disease which attacks sheep. It is most frequently encountered in Scotland and Northumberland. The pathology of this peculiar malady is not yet understood. The disease usually makes its appearance between the months of April and June, its characteristic being the manner in which outbreaks are confined to small areas. For instance, a flock in one field may be attacked, and another separated only by a wire fence may remain free of disease.

The outstanding manifestations of attack are the onset of paralytic symptoms; the muscles of the head, neck, and limbs become involved, complete paralysis of the parts resulting.

It was thought that a 'tick' conveyed the disease from animal to animal, but flocks free of the parasite have been attacked. After death the spinal cord and its coverings may be found diseased. Should sheep be attacked, they soon become emaciated, their flesh being in consequence unfit for human food.

Foot and Mouth Disease (Aphthous Fever, Epizootic Eczema).

This disease is not so common as it formerly was. It most frequently attacks cattle, though sheep and pigs may be affected. The disease is inoculable and contagious, and is transmissible to man. Its pathology has not been defined.

The parts involved are the mucous membrane of the 'pad' (the toothless border of the upper jaw), the coronet, the skin in the cleft of the hoofs and at the supernumerary digits. When cows are attacked, the risk of transmission to man is increased, the teats and udders being affected. Now and again the mucous membranes of the pulmonary and alimentary tract may be involved.

The parts become inflamed, and vesicles about the size of a florin appear. These burst, and leave a red and angry sore, suppuration invariably ensuing. When the erosion of the ulcers is severe, hæmorrhage may occur. Sloughing of the hoofs may take place.

When the mouth alone is examined, foot and mouth disease may be mistaken for actinomycosis. On the other hand, if the hoofs be looked at and not the mouth, the condition of the former may be ascribed to injuries. *Foot rot* in sheep may also lead to confusion, but in the case of this disease no vesicles or ulcers are to be seen.

No ill-effects have followed the eating of meat taken from animals that have suffered from foot and mouth disease. The contagiousness of the disease must, however, be kept in mind. Since pyæmia may be the ultimate cause of death of the animal attacked, the meat should not be used for human food. In practice the meat is never allowed to pass out of the slaughter-house in this country.

Malignant Catarrhal Fever.

This disease has a place given to it because it has been confused with cattle plague. The bacteriology is unknown, and the disease is not communicable to man. The appearances of the alimentary canal in cattle plague and malignant catarrhal fever are not unlike

one another, but in the advanced stages of the latter disease a foul-smelling discharge comes from the nostrils ; hæmorrhages into the interior of the eye, with acute inflammation, may also be seen, The meat is unfit for human food, though recently killed meat has been eaten without harm resulting.

Actinomycosis.

This disease is also known as **lumpy jaw** and **wooden tongue**. It is produced by the ray fungus (actinomyces), and is most common amongst cattle. Pigs are also liable to attack. It is rare to find the disease among sheep and horses. In its degenerate forms, as found in the tissues, the parasite cannot infect others by inoculation.

Actinomyces give rise to a thickening of the parts attacked without the formation of pus. If suppuration does take place, it is due to cross-infection with pus-forming organisms. When the head is attacked, as invariably happens, the enlargements are often very great, inflammation of the bone, as well as excessive development of granulation tissue, being the cause. When the jaw is attacked, the term **lumpy jaw** becomes applicable to the condition found. Since the tongue is attacked with unfailing regularity, and the thickenings are tough and leathery, the name **wooden tongue** aptly describes the condition of the organ. Erosions are found on the tongue and inside the buccal cavity. In all deposits caused by actinomyces yellow spots denoting the presence of the ray fungus colonies may, after careful scrutiny, be detected. The fact that actinomycosis may attack the lungs occasionally leads to the confusion of this disease with tuberculosis. The presence of extensive ulcers in the former disease, and a microscopical examination, assist in establishing a diagnosis, these ulcers being found in defined areas. Infection of the liver may take place indirectly through the portal vein or directly from the stomach. The udder and kidneys may be involved, the former with tubercle-like deposits, as small as pin-heads or as large as hens' eggs. When swine are attacked, the mammary glands may be the site of abscesses in which the ray fungus abounds. Actinomycosis frequently occurs in isolated cases.

The transmissibility of the disease to man must remain an open

question. Among seventy-five persons attacked, contact with animals could not be traced, thirty-three of them being millers, tailors, glaziers, or merchants. That there is risk attached to the eating of infected meat has not been proved.

The disease is now believed to be communicated to animals by cereals and straw.

When the disease is well distributed throughout the carcass its destruction should follow. If, however, the disease be localized and the carcass well nourished, the affected portions may alone be rejected.

Black Leg (Black Quarter).

Also known as *quarter-ill*, *striking*, *murrain*, and in Scotland as *black spauld*. Cattle are most commonly attacked between the ages of four months and four years. The bacillus which causes the disease has its habitat in wet and marshy soils. The peculiar feature of the organism is that it is spore-bearing, the spores remaining inactive until the animal has been dead for one or two days. Therefore, meat cooked on the day of slaughter may be rendered harmless, but if not treated by heat until twenty-four hours after death of the animal the spores may resist destruction.

The most characteristic lesions are to be found under the skin in the form of crackling tumours due to gas formation. This emphysema rapidly spreads over the surface of the body, the thigh, neck, shoulder, loin, sacral region, and lower part of the breast being most frequently attacked. High fever almost invariably accompanies the attack.

When an emphysematous part is cut into, a disagreeable smell escapes. Under the skin itself there is an infiltration of bloody mucoid matter, the underlying muscles being dark in colour. Hæmorrhages and serous exudations may be found in and under the serous membranes. Cloudy swelling may be found in the heart, liver, and kidneys. The gelatinous-looking appearance of the tissues underlying the hide might at first suggest the existence of anthrax in a carcass, but the absence of splenic enlargement will aid in establishing a diagnosis.

Meat from animals that have died as the result of black leg is never eaten.

Glanders and Farcy.

This malady is strictly confined to horses. Cattle have never been known to contract the disease. The ailment has been mentioned because it may be contracted by human beings.

When the microbe attacks the mucous membranes and the organs, the disease is known as **glanders;** but when the superficial lymphatics and skin are involved, **farcy** is the name applied to the resulting lesion. The lungs and nasal septum are the parts most commonly attacked. In the case of **farcy,** 'buds' usually form on the skin of the limbs, and especially on their inner aspects. The 'buds' invariably break down, leaving discharging ulcers.

The source of danger to man consists in the handling of infected animals, be they alive or dead.

Elsewhere reference has been made to the employment and nature of mallein. The Glanders and Farcy Order, 1894, Section 17, enacts that glandered meat must be condemned.

Navel-Ill and Joint-Ill.

When the umbilical cord has been improperly cared for, pyæmia may result by the entrance of septic organisms. When this form of sepsis occurs, the condition is known as 'umbilical pyæmia.' Multiple abscesses are found in the liver, and in consequence of the blood-stream being involved, abscesses are distributed throughout the body. Fortunately, most calves affected die before they reach the slaughter-house. When a calf suffering from **navel** or **joint ill** is sent for slaughter, condemnation of the carcass must be the rule. Elsewhere reference has been made to the risks attached to the consumption of sausages containing pyæmic meat. When **joint-ill** is encountered, the hocks and knees are much enlarged, the swelling being due to inflammation of the joints. All young animals—calves, pigs, lambs, and foals—are subject to attack, since their cords are left to Nature to effect the healing process.

Septic (Puerperal) Metritis.

This condition is frequently met at the slaughter-house. It is quite unnecessary to enlarge upon the causes when one realizes under what filthy conditions parturient animals, especially cows, are in many cases expected to exist.

The uterus is filled with abominably fœtid débris, which may be bloody or purulent. The pelvic tissues in the neighbourhood of the generative organs are hyperæmic and angry-looking. There may be distinct evidences of septic peritonitis. Should the cow have been ill for some time, abscesses in the pelvic region may be found. Septicæmic abscesses may also have established themselves throughout the carcass. The flesh is fevered and dark, and stasis of blood from decubitus of the sick animal may be expected. Such a septic condition calls for condemnation of the affected carcass.

Milk Fever (Parturient Apoplexy).

This disease must not be confused with that just described. **Milk Fever** is common among cows, heavy milkers being most subject to attack. Also cows in good condition are more susceptible than lean or poorly nourished animals. The disease is believed to be due to an auto-intoxication, the poison developing in the udder. It is seldom encountered among cows until after their third parturition.

The onset is sudden, and develops forty-eight hours after calving, when the affected cow becomes greatly excited. She staggers, and finally falls on her side, on which she lies, as if suffering great pain. She may injure herself by dashing herself from side to side. Coma ensues, and the temperature becomes subnormal.

After death of the animal the flesh is dark and fevered. The blood is tarry-looking, and the lungs may be congested. There may be evidences of bruising over the sides, hips, and chest, the result of self-inflicted injuries. Cows killed by the butcher do not bleed freely.

The carcasses of such cows are unfit for human food.

Mammitis.

Inflammation of the mammary gland is often ascribed by the cow-feeder to be due to chills, hence his great antipathy to free ventilation of his cowshed. 'Weeds' is the term applied to inflamed udders. Should the inflammation end in pus formation, the cow is sent to be slaughtered, but it is only when the contents of the abscess are foul-smelling and septic that one requires to consider the need for total destruction of the carcass. The abscess may be confined to one quarter of the udder. Even though the entire udder be involved, the confiscation of that part will, in the majority of instances, alone be necessary.

Milch cows are most commonly attacked. When the heifer is the subject of disease, suppuration of the udder is the invariable rule.

CHAPTER XII

OTHER CONDITIONS MET AT THE SLAUGHTER-HOUSE

The loss of good material for teaching purposes—Heart lesions—Excited animals ; the use of drugs ; broken limbs—Slink veal—Objections against ' blowing ' by butcher—Degenerations—Cow-pox—Diarrhœa—Strongyli—Parasitic diseases.

During the routine work of meat inspection many interesting pathological conditions apart from those already described are met. These to a well-trained and competent meat inspector are always significant, and tempt him to pursue his investigations until he learns the true significance of the changes. It is tantalizing in the extreme to the painstaking student of meat inspection to learn, as he often does, upon visiting the slaughter-house, that the organs of a particular animal exhibited peculiar features, but that, in the absence of definite information and knowledge, the person in charge had cast the organs into the manure-pit.

It can be readily imagined how meagre our knowledge of human pathology would have been had demonstrators in anatomy and pathology immediately destroyed all bodies which exhibited conditions that were at the moment unintelligible to the observer. Much useful material for teaching purposes is lost at our large slaughter-houses because no one in charge is skilled in the significance of the various morbid conditions encountered.

Heart lesions, accompanied by pallid flesh and dropsy, due to impacted needles, nails, hairpins, etc., are not infrequently seen. Animals that have been drowned, suffocated, or killed in transit are sent to the abattoir. Animals brought to the slaughter-house in a dying condition are imperfectly bled. Their flesh is dark, blood-stained, the internal organs being gorged with blood, and the meat sets badly. As has already been pointed out, tired, excited, or infuriated animals should always be rested for a day or more

before slaughter. If killed when excited, their flesh is apt to be harsh and dark, suggesting inflammatory conditions. Animals are often removed to the slaughter-house after every effort has been made with the help of drugs to tide the beast over its illness. Not only must one examine the flesh for the taint of medicine, but it will be necessary to look for the cause of illness. This will be frequently localized in the lining of the stomach and intestines in the form of an acute enteritis, accompanied, perhaps, by peritonitis. Bones and tendons are frequently broken in course of transit, but if the animal be immediately killed there need be no hesitation in passing the meat. Should sepsis have supervened, the dark and fevered condition of the flesh will warrant seizure.

When veal is immature (**slink veal**), seizure may be necessary. In some abattoirs calves are blown after slaughter—that is to say, a puncture is made in the skin, and air blown forcibly under the hide, in order to render it more easily stripped off the young animal. As soon as air has been blown the puncture is closed, and the imprisoned air pounded with the hand, so as to raise the hide by lateral pressure of the contained air. It is maintained that blown veal keeps better than that not so treated. While the need to blow veal does not actually exist, there is no objection in some minds to the procedure provided the application of the butcher's breath be strictly prevented. The habit is a filthy and reprehensible one. Insufflation of air by a properly devised instrument—a powerful syringe, for instance—cannot be objected to if the instrument be maintained in a cleanly state, and air free from dust or gross impurity employed.

Putrid meat is easily detected.

Fatty degeneration is found in the livers of cattle and sheep. Cirrhosis usually accompanies this condition. **Amyloid** or **waxy disease** is seldom seen in the slaughter-house. It does, however, exist in the livers, kidneys, and spleen (sago spleen) of horses and tuberculous pheasants. **Necrosis** (death of the part involved), due to moist gangrene, renders meat unfit for human food. The condition known as **bacterial necrosis** is occasionally encountered in the livers of cattle. The lesions, which are liable to be mistaken for tuberculous deposits, are caused by organisms, which can be isolated from the margins of the dead areas. The areas involved

may be as small as pin-heads or as large as a shilling piece. A grumous-looking substance is contained in the necroses. Since the disease is localized, it is only necessary to confiscate the affected organ. Tumours of various kinds may be occasionally observed in slaughtered animals. **Red water,** caused by the breaking up of the red blood-corpuscles, is rarely observed. When this disease manifests itself, the liver becomes enlarged. In the dead areas the tissues are pigmented, and the flesh pale and watery. Condemnation always follows. **Cow-pox** does not render meat unfit for human food, but, as has elsewhere been remarked, the existence of this disease constitutes a source of danger to the milk consumer, as well as those who handle affected teats and udders.

Calves that have suffered from **diarrhœa** (white scour) are sometimes bled immediately before being brought to the slaughter-house. The fact that bleeding was urgently called for must of itself arouse suspicion. Also, in the absence of a definite history of illness the lining of the stomach and intestines must be carefully examined, since white scour leaves traces of congestion and white curdy matter behind it. Further, if a calf has been ill for a few days, its carcass will be greatly emaciated. Calves that have suffered from diarrhœa immediately before being slaughtered are not fit for human food. **Strongyli** in sheeps' lungs are extremely common. Their presence has given rise to the application of the term 'false tubercle.' **Hoose** is another name applied to the condition caused by the presence of these worm-like parasites, which can be readily detected by the naked eye and by the fingers. It is only when the lungs are seriously involved that seizure of the organs need follow.

Diphtheria in fowls results in the formation of a membrane which attacks the conjunctiva, pharynx, mouth, and breathing passages. The disease is caused by a bacillus. There is nothing to prove that the disease is transmissible to man, but the fact that animals affected are emaciated renders their flesh unfit for human food.

Parasitic Diseases.

The diseases that will be dealt with are those due to the beef bladder worm (*Cysticercus bovis*), pork bladder worm (*C. cellulosæ*), and trichina (*Trichina spiralis*). Among fish the *Bothriocephalus*

latus (bladder worm) is found, though it also is met with in cattle and hogs.

Beef Bladder Worm (Cysticercus Bovis). — This is the larva of a worm known as the *Tænia saginata* of man. This parasite, as found in the muscle substance, lungs, liver, brain, and lymphatics, is pear-shaped. The size of the parasite varies between that of a millet and a hemp seed. As found in the tissues of cattle, the size may be as small as a pin-head or as large as a pea. The muscles of mastication, in the vast proportion of instances, contain the worm, the heart and tongue figuring next in order of frequency.

In Germany meat is systematically inspected for the presence of *C. bovis*. In this country little inspection is done, because due importance has not been attracted to the subject. That the inspection of the meat for *C. bovis* is necessary has been brought forcibly home to the author, who adopted zomo-therapy (raw meat treatment) for those being treated for tuberculosis of the lungs at the Leith Isolation Hospital. Among those partaking of raw meat several developed digestive disturbances discovered to be due to tapeworm. The discovery led to the discontinuance of the raw-meat dietary.

Elaborate methods are employed in Germany for the detection of cysticerci in sausages and mincemeat. A lye is prepared from a soluble alkali such as caustic potash or soda, the strength of the solution being such that shreds of lean meat float on the surface of the liquid. Having given the lye time to clarify, it is decanted into a glass drawn out to a fine point at its base. The mincemeat, or sausage, is then mixed with a small quantity of the alkaline solution until a thin broth is formed, this broth being poured into the conical vessel already mentioned. While this mixture is being stirred, water is added until pieces of meat begin to sink. If **cysticerci** be present, they sink at once, and can be readily isolated by getting rid of the rest of the débris.

Infected meat is dangerous only after the head of the parasite has developed. Meat containing degenerate cysticerci may be sold as fit for human food, but it must be pointed out that mature cysticerci are frequently associated with those that have become degenerated.

Boiling, pickling, or cold storage for two or three weeks kills *C. bovis*.

Hog Bladder Worm—Pig Measles (Cysticercus Cellulosæ).—This parasite gives rise to *Tænia solium* in man, and, like *C. bovis*, is found in the muscle substance. The scolex of the pig bladder worm possesses a double circle of hooks not found in the beef parasite.

The worm is most commonly found in the abdominal muscles, pillars of the diaphragm, and in the lumbar, intercostal, neck,

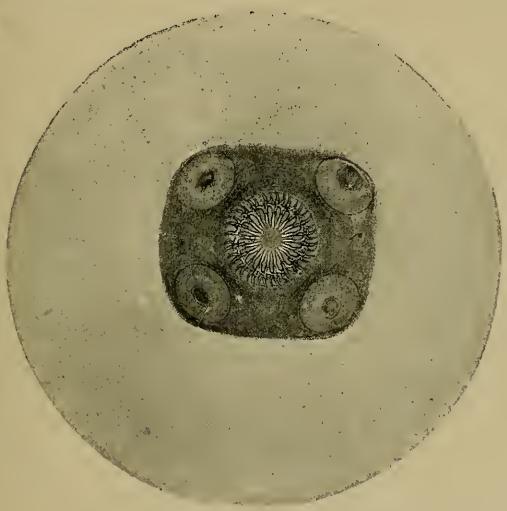


FIG. 38.—HEAD OF TÆNIA SOLIUM.
(Sommerville's 'Practical Sanitary Science.')

and mastication muscles. It is also encountered in the tongue and heart. Only in rare cases is it found in the lungs, liver, or spleen.

The size of the parasite varies with its age. At the end of three weeks it may be about the size of a pin-head, and at the end of two months as large as a pea.

The disease is not so common as it formerly was.

Since raw pork is not such a common article of food in this country as it is in Germany, the cases of infection with *Tænia solium* are rare. Boiling and pickling are destructive to cysticerci of the pig, which are more resistant than are those of *C. bovis*. Cold storage

does not render measly pork harmless to man. *C. bovis* die sooner in meat than the parasites of *C. cellulosæ*.

To roughly examine pigs for the presence of *C. cellulosæ* the mouth is forcibly held open, and the under surface of the tongue examined by the fingers for the detection of the shotty deposits in that organ.

In Germany the authorities refuse to permit the sale of measly pork unless it has been rendered harmless to man by cooking or other appropriate treatment—*e.g.*, pickling. Slightly infected pork is sold from the *freibank*, and accompanied by the usual declaration

FIG. 39.—TRICHINA SPIRALIS.

(Sommerville's 'Practical Sanitary Science.')

regarding the inferiority of the article vended. When the pork is speckled with cysticerci the carcass ought to be condemned.

Trichina Spiralis (Trichiniasis).—This parasite is found in the fat and muscles of swine, those principally attacked being the diaphragm, the intercostals, and the muscles of mastication. When enclosed in their capsules, the worms are easily detected by the naked eye. A weak solution of caustic potash may be used as an accessory to clear the capsule and to expose the coiled-up thread-worm within. Should the capsule have become calcareous, it may be necessary to use acetic acid or ether to partially dissolve the thick envelope.

When *trichinosis* attacks man, the muscular pains which follow

suggest to the physician's mind the presence of rheumatic manifestations, the pain being often intense, but, unlike rheumatism, confined to the muscles. Œdema is often present; digestive disturbances and fever are also observed.

The manner in which *Trichina spiralis* attacks man is as follows: When infected flesh enters the stomach the gastric secretions dissolve the capsules containing the trichinæ, which are then free to grow in the intestines. After a few days' stay in the intestines the parasite is easily seen as a white thread-like body. The

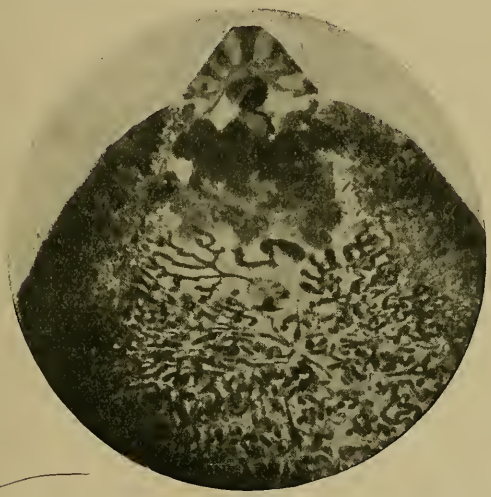


FIG. 40.—HEAD OF DISTOMA HEPATICUM, SHOWING SUCKER.

(Somerville's 'Practical Sanitary Science.')

females produce enormous numbers of young, which at once migrate penetrating the intestinal walls, and reach the tissues, where they settle down. It is during this transition stage that the acute pains so often felt manifest themselves. Should the disease take a favourable turn, it is because the worms have become encysted, and incapable of doing further harm to their host.

Trichinosis is not common in this country, because the inhabitants rarely eat ham that has not been cooked. In Germany the malady was formerly commonly met with, but rigid inspection has greatly reduced the incidence of the disease.

It is only by training meat inspectors in the use of the microscope that the public of this country can be protected against measly meat or trichinosed pork. Trichinosed pork should be condemned as unfit for human food. Trichinæ may be killed by efficient cooking; pickling and curing by smoke also render trichinous pork safe for human food.

Ascarides.—These cylindrical worms, varying in length between 4 and 10 inches, are found in the small intestines of the calf, sheep, and pig. The latter animal is most subject to attack. The fact that these worms give off a disagreeable odour which permeates the flesh justifies condemnation of affected carcasses. Not only is the smell objectionable, but the taste of the meat is rendered unpleasant.

Distomatosis or **Fluke Disease.**—This condition, most commonly found in sheep, is known as **rot,** and is caused by the presence of the *Distoma hepaticum*, or liver fluke.

The distoma is of a dirty blue colour. It is about an inch long and $\frac{1}{4}$ inch in breadth, and resembles a plaice in shape. It is quite flat, and can be frequently demonstrated at the slaughter-house. The bile-ducts of the liver are the common habitat of the fluke-worm, though it may migrate to the intestines along the bile-duct. Stockman has frequently found flukes in the lungs of oxen.

Cirrhosis of the liver is caused by the presence of flukes, and as a result the affected animal may become very thin. This emaciation is found among sheep, the flesh of the affected animal becoming pale and watery.

It is only when the carcass is thin and the flesh of poor appearance that total seizure becomes necessary. Usually the disease is confined to the liver, in which case only that organ is confiscated.

CHAPTER XIII

FISH, OYSTERS, MUSSELS

How fresh fish are preserved—The liability of gutted fish to seizure—Keeping qualities of fish—Characteristics of good and bad fish—Methods of catching fish—The dangers of unsuitable gathering-grounds for oysters, mussels, and whelks.

At those sea-ports which form the headquarters of trawlers and fishing-boats, the fish-market, held at an early hour of the morning, will demand the constant attention of the food inspector.

Trawlers propelled by steam, as many now are, are capable of going long distances to sea in search of productive fishing-grounds. It therefore becomes necessary, after fish have been caught, to gut and pack the catch in boxes filled with broken ice. Accordingly, the longer the gutted fish have been kept before being brought to the market, the greater need will arise for care in examination on the part of the official concerned. If the trawler could return immediately from the fishing-ground, the need for gutting and icing would be obviated. To supply the London market with perfectly fresh fish, small steamers are specially fitted to visit the trawling fleets. This enables the trawlers to remain at sea for an indefinite period, and whilst avoiding the necessity for gutting and preservation in ice, also relieves the trawlers of superfluous cargoes of ice and boxes.

Now and again abnormally heavy catches are landed, with the result that the market is overstocked and prices fall. In order to prevent a glut and a reduction in profits, surplus quantities are despatched by rail or steamer to another fish-market. Should such consignments be transferred from one place to another, the fish inspector must at once send warning of the fact to the official

responsible. Many seizures of such consignments of unsound gutted fish may be made as a result of such warnings.

Gutted fish are usually bought at the market by street-vendors. Consequently the entire stock-in-trade of many fish hawkers may be seized and destroyed by the health authorities. The hawker himself is well aware that his purchase at the market is a questionable transaction. Accordingly, seizure of the fish he is selling meets with frank acquiescence. When this experience is met it will be generally found that the readiness to permit seizure is accompanied by urgent appeals in favour of lenient procedure on the part of the official.

All varieties of fish do not keep equally well. Halibut, cod, haddock, and turbot, may be kept on ice for a week and yet be fit for use. Ling, whiting, mackerel, and herrings should be used at once. The same may be said of salmon, which contains more fat than any other species of fish, not excepting eels, mackerel, and herrings. Shellfish of all kinds quickly decompose, and should be eaten soon after being caught.

The flavour of fish depends upon the nature of the feeding and the fat contained in the fish. The sea fish most favoured are those caught in deep water where the currents are strong. Fish caught in sluggish, shallow, and warm water are seldom palatable. Fresh fish which is sound and fit for human consumption should be stiff and free from much sliminess. The eyes should be bright and clear, not sunk in their sockets and dim. Stale fish are soft, and, in addition to possessing a most offensive smell, their flesh pits on the slightest pressure.

If the fish have been gutted for some time, the points of inferiority already mentioned will be present. On further examination of the fish for evidences of decomposition, the great discoloration of the internal surfaces, the foul smell, and the ease with which the flesh can be detached from the bony structures, will be observed. Should the last-named feature be present, the condition of the fish will be found to be very unsatisfactory. Street hawkers frequently deal in ling ; and as this fish, when fresh, is soft as compared with other varieties, one must not be too hasty in forming a judgment regarding unsoundness. The same caution should be exercised when cat-fish are suspected of being unsound. The

repulsive-looking head of the cat-fish is invariably cut off before exposing the rest of the body for sale.

Fish are caught by trawling, line-fishing, drift-net-fishing, seine-fishing, and moored-net-fishing. A brief description of these methods may therefore be of interest.

Trawl Fishing.—All along the east and west coasts of Scotland and England trawling is carried on by fleets of steam or sailing vessels, the rapidity of the former, and the ease of handling them, having led to a great increase in their numbers.

Amongst the fish most commonly caught by the trawl-net are halibut, turbot, brill, sole, plaice, flounders, cod, haddock, whiting, hake, ling, and red mullet. All varieties of fish that feed at the bottom of the sea are also brought to the surface in large quantities.

The trawl-net is triangular in shape, and made like a bag, the mouth of the bag being kept open by a wooden beam suspended from a triangular hoop of iron. When the trawl is heaved overboard it sinks to the bottom, along which it is dragged by the vessel, moving at a slow pace. When the ground fish are disturbed, they attempt to escape, many being caught in the net and trapped at the conical end of the bag.

Many difficulties attend the use of the beam trawl, in the form of rocky bottom, sunken wrecks, and other unlooked-for obstacles, and it may be necessary to cut the net adrift on account of its having become firmly fixed at the bottom of the sea.

Line-fishing is usually carried on by deep-sea boats, long lines, to which large numbers of hooks are fixed, being employed. The hooks are baited with mussels, pieces of herrings, sand-eels, or whelks. Cod, ling, halibut, turbot, skate, coal-fish, and ray, are caught by these long lines. Haddock-fishing is carried on by smaller boats employing shorter lines. When the line is ' shot,' a sinker draws the hooks to the bottom. Attached to the sinker is a line, to the end of which is fixed a float, which marks one end of the line. As the boat moves slowly along, the line is slipped overboard, care being exercised to keep the hooks from sticking to the sides of the boat. To prevent this, the line is passed over a smooth metal shute. When the last of the line has been reached, another sinker is dropped, and to this is attached a line holding at the water's surface another indicator in the form of a small buoy with a flag

attached. Some deep-sea boats using lines are fitted with tanks containing salt water in which fish can be kept alive until the market is reached.

Drift-net-fishing is employed to catch fish that swim near the surface—*e.g.*, herring, mackerel, and pilchards. The net is shot as the boat moves along, sinkers attached to its lower borders dragging the net down. To maintain the net in a perpendicular position, corks and bladders fixed to its upper border are employed. The mesh of the net differs according to the variety of fish to be caught. As fish swim along they come against the drift-net, and, in attempting to force their way through the meshes, are caught by their gills. When fish—more particularly herrings—are firmly caught, their heads may be torn off or their bodies lacerated. Such mutilation depreciates the value of the fish. In point of fact, herrings that have been lacerated are known as 'T.B.'s' (torn bellies), possess a poor market value, and rapidly deteriorate. Herrings that have been bruised and subsequently packed in barrels with salt are also liable to be seized and condemned as unfit for human food. Enormous quantities of herrings are expeditiously gutted, sorted into sizes, salted, and despatched in barrels to the Continent from this country. Such small villages as Baltasound in Shetland become busy townships during a prosperous herring fishing season, thousands being employed in the fishing and fish-curing industry.

Seine-net-fishing is practised along the coasts and in rivers. The 'seine' is worked from the shore, the net being shot from a rowing-boat, which, after making a wide détour, returns to its starting-point. One end of the net is fixed to a windlass, while the other is pulled by the fishermen, who walk along the beach in the direction of the windlass. The net is thus converted into a bag, and the fish engulfed. This is a favourite method of catching salmon in rivers.

Moored nets are sometimes known as **stake-nets.** As the name implies, the nets are attached to upright stakes fixed at right angles to the shore and across the current. At intervals the net is fashioned into bags in order to trap fish swimming close in shore. Salmon and sea-trout are usually caught in stake-nets, generally placed in the estuaries of rivers favoured by pink-fleshed fish.

Shell-fish.—Crabs and lobsters are caught in dome-shaped wicker-work cages, in which fish-bait is placed. Crabs and lobsters, tempted by the bait, crawl up the sides of the cages, enter funnel-shaped openings, and once in cannot escape.

Oysters are usually dragged from a laying or bed by means of a trawl. The danger attached to the eating of oysters gathered from sources polluted by sewage, and especially if contaminated by enteric excreta, is too well known to require emphasis here. Attempts have been made to secure legislation that would prevent the laying of oyster-beds in unsuitable places, but without success. Oysters derived from polluted beds may be seized by the health official if he considers, after investigation and bacteriological examination, that they are a source of danger to the consumer. Unfortunately, mischief has often been wrought before attention is drawn to oysters as the probable cause of an outbreak of enteric fever.

Mussels and **whelks** are also collected from most unsuitable places. At many seaside resorts, every summer and autumn, despite printed notices conspicuously exhibited at intervals along the foreshore, cases of enteric fever and choleraic diarrhœa are distinctly traced to the consumption of shell-fish gathered from areas to which sewage has access.

CHAPTER XIV

PTOMAINE AND FOOD-POISONING

Dr. Ballard's investigations — Pork poisoning — Middlesborough outbreak — Sausages — Veal — Gaertner's bacillus — Canned meats — Raw herrings — Pies.

REFERENCE has been made to the occurrence of ptomaine-poisoning as the result of eating tainted food. Ptomaine-poisoning is not confined to the eating of tinned foods alone, since Dr. Ballard has very fully dealt with many striking and interesting outbreaks caused by the eating of pork, either roasted alone or mixed in pies. Pork appears to favour the rapid development of poisonous micro-organisms on account of its richness in gelatine, a favourite medium in bacteriological laboratories for the growth of germs of various species. Of the fourteen outbreaks investigated by Dr. Ballard, ten were due to eating pig-meat.

It is often impossible to detect any change in meat laden with the alkaloid associated with the ptomaine poison. This hidden danger to the consumer is a serious factor which must be taken into account.

In this connexion a few examples may be briefly quoted. Dr. Ballard relates the case of a shopkeeper at Oldham who sold American pigs' tongues to three different customers. The tongues were contained in a tin. Those who ate the tongues were almost immediately seized with sickness, vomiting, diarrhœa, and became collapsed.

In another instance roast pork, when warm, was eaten on a Sunday for dinner and cold for supper without ill-effects; but when eaten cold next day it produced such bad results that two persons died after an illness lasting only thirty hours.

The Middlesborough scare in 1888 remains as a striking example

of a widespread outbreak, since five hundred persons were attacked and many died as a result of pleuro-pneumonia. Dr. Ballard's conclusion was that American bacon had been the source of the mischief, rats fed on the bacon developing similar symptoms to those noted in the consumers.

When pork or veal (both rich in gelatine) have been eaten raw or imperfectly cooked, and if the meat has been derived from an animal that has been sick or dying of pyæmia, septicæmia, or pneumo-enteritis, the consequences to the consumer may be very serious. The tendency to relapses in this form of poisoning by specifically contaminated meat is characteristic. The patient may appear to be progressing favourably, when a return of the symptoms manifests itself. Second relapses have been known to occur. The reason assigned for this peculiar feature of the attack is that toxins are effectually dealt with by the antitoxins produced in the system, but during the interval of temporary convalescence spore-bearing organisms give rise to a renewed crop of toxin-forming bacteria.

Poisoning by pork sausages has been recorded on several occasions. It has elsewhere been pointed out that sausage-making premises must be carefully examined, not only for the detection of structural defects, but also to ensure that nothing but the best materials are used for making the sausages.

Sausages made from the liver of a healthy pig were smoked for a few days and suspended to dry. On the eighth day they were eaten by all the members of a family save one, a girl, who disliked the peculiar taste of the sausages. She alone escaped attack from the following symptoms: abdominal pain, vomiting, dizziness, parched mouth and throat, and difficulty in swallowing; pupils became dilated, and loss of sight followed; pulse grew weak and rapid, accompanied by oppressed respiration, and finally death.

In another case illness was traced to the consumption of horse-flesh made into sausages, the liver of the horse being the principal ingredient used. Soon after the sausages were eaten by several persons they developed headache, abdominal pain, diarrhœa, trembling, and great thirst. An organism bearing a resemblance to Gaertner's *Bacillus enteritidis* was isolated, this organism being commonly found in such cases.

As in the case of pork and veal, the consumption of *beef* taken

from animals that have shown evidences of disease of a septicæmic origin is very liable to produce manifestations of toxic poisoning. The flesh of animals dying from any of the following diseases is liable to give rise to food-poisoning—viz., septic metritis, intestinal disorders, hæmorrhagic enteritis in calves, pyæmia of the calf due to infection through an improperly tended umbilical cord, and pyæmic abscesses in cows or calves.

In Saxony 137 persons were seized with diarrhœa, pain, and other symptoms of gastro-intestinal involvement. They had eaten mince made from the flesh of a cow that had suffered from putrid abscess in the udder. The animal, appearing to be very ill, was slaughtered and its flesh sold next day. As indicating its virulence, it was stated that the butcher and his assistant who sold the meat tasted some from the point of a knife, and were ill for three days. Most of the victims of the poisoning had eaten the meat in its raw state.

In the *British Medical Journal*, November 11, 1899, Dr. Parker describes an outbreak in Sheffield due to the eating of *canned beef*. The only peculiarities noticed when the tin was opened were that the beef was not so firm as usual, and that the jelly had an oily appearance. There was no disagreeable odour, and only one customer detected a bad taste. Twenty-four persons ate the meat, and all were affected in different degrees by the following train of symptoms: Soon after eating the meat, faintness, giddiness, and drowsiness, with weakness in the legs, ensued. This was followed by uncontrollable vomiting, intense frontal headache, purging, and severe colic. The skin was pale, the knees drawn up, and the patient bathed in perspiration, with lividity round the eyes. The pupils were widely dilated, pulse feeble, respirations shallow, and temperature subnormal. After the stomach was washed out in one case the vomiting and purging ceased, only to return again after the lapse of an hour. Again the stomach was washed out, with permanent good effects. Next day the patient was well, save for a frontal headache. Only one patient died, and in him the foregoing symptoms were very severe. Most of the victims were convalescent at the end of forty-eight hours. The Gaertner bacillus was isolated from the meat in the tin.

Veal pies, imperfectly cooked, gave rise to an outbreak (*Public Health*, January, 1899) of poisoning. An apparently healthy calf had been killed, its forequarters and breast being sold to a baker, who used the meat for pie-making. No other parts of the animal, also used for pie-making, caused poisoning. The only conclusion that could be arrived at was that contamination had taken place after the veal left the butcher. Those who ate pies that were a day or more old suffered most severely, thus favouring the view that proliferation of mirco-organisms in the pies had taken place. Here again Gaertner's bacillus was isolated.

On the Continent *raw herrings* are a favourite article of diet, and from the eating of such fish which showed commencing putrefaction a family was poisoned. The outstanding feature in this instance was the protracted duration of the illness, which, in one case, began in March and continued till November, heart symptoms being chiefly noted.

Tinned salmon not infrequently gives rise to severe illness.

CHAPTER XV

RETAIL SHOPS AND FARM PRODUCE

Butchers' shops—Poultry and game—Fried-fish shops—Sausage-making—Tinned foods—Blown tins—Preservatives—Butter—Cheese—Margarine—Eggs.

Butchers' Shops.—The official has seldom cause to complain of the manner in which these shops are maintained. The butcher is intelligent enough to appreciate the necessity for preserving walls, floors, and benches in as pure a state as possible. Failure to keep his premises clean would tell against him, because putrefactive bacteria would very quickly make their presence felt in meat exposed for sale. In the poorer localities, however, one may encounter shops kept in a slovenly state, with waste portions of meat, fat, and bones cast into corners. All bones and waste tissues ought to be stored in receptacles that are impervious to moisture, and therefore easily cleansed. Reference has elsewhere been made to the manner in which tripes should be kept in anticipation of sale.

Butchers usually scatter sawdust over the floors of their shops in order to absorb any spillings of blood and fat, the sawdust being swept away and renewed daily. Greasy floors should be washed with hot soda solution. All wooden chopping-tables should, after scraping, be similarly treated.

Poultry and Game.—It is seldom that fowls are seized by an inspector, though now and again animals that have, previously to being killed, suffered from diarrhœa (scour), or such other diseases as tuberculosis (roup) and gapes (a condition caused by worms located in the windpipe), rapidly deteriorate. Poulterers frequently crush in the sternum in order to impart to aged fowls

a feeling of tenderness. Fowls kept too long have an offensive odour, and show loose, easily detached skin, which becomes green over the abdomen and crop.

The taste for game that is ' high ' is an acquired one. Large consignments of ptarmigan, that are presumably a delicacy to the epicure, are liable to be seized on account of their advanced state of decomposition.

Rabbits and hares that have been kept for a long time frequently demand seizure.

Fried-fish shops concern the official in more ways than one, since not only, as has been shown, may inferior fish be used, but serious nuisance may be, and frequently is, complained of by those living in proximity to such premises. Fried-fish shops are seldom open during the daytime for business purposes. It is at night that business is done. The official will accordingly find it advisable to pay surprise visits when operations are in full swing or about to commence. The floors must be kept clean either by protecting them with a liberal covering of clean sawdust or by frequent washing with warm soda solution. Should the shop, as it often is, be subdivided into compartments, these must be examined for evidences of slovenly methods of cleanliness. The fish, before and after preparation, should be critically examined, as well as the receptacles in which they are kept. Monday evening should be selected as a time for inspection, since fresh fish are not plentiful in the market in quantities on that day, the majority of trawling-vessels being in harbour over Sunday. Fish used on Monday are not infrequently those that have been kept since the previous Saturday. That such fish urgently call for seizure has more than once been proved to the author. If the fat in which the fish are cooked be rancid, or if some cheap substance, such as oil of sesame or cotton-seed oil, be used, offensive smells may be expected.

A hot plate is usually employed on which to boil the fat. When the fish are removed from the cooking-vessel, fat is frequently spilled on the hot plate, and the resulting fumes of pungent smoke rapidly fill the interior of the premises. Should the ventilation be unsatisfactory, as it often is, the atmospheric pollution becomes very objectionable. A large metal hood placed immediately over the hot plate, but clear of the cook's head, will greatly aid in preventing

nuisance in the room by carrying away all traces of burning or boiling fat. The hood, it should be observed, must have its outlet connected to a suitable flue or shaft. The burning of a gas-jet in the outlet of the hood is recommended to accelerate the suction of effluvium and smoke upwards.

If fish-frying were listed as an offensive trade, the control of the premises in which it was carried on would be much more effective and satisfactory. It is questionable, however, whether nuisance could be altogether avoided. Chief concern must be directed towards ensuring the adoption by the trader in fried fish of every practicable means to obviate the occurrence of nuisance.

Sausage-making.—Strict supervision of sausage-making premises is necessary. Sausages sold by firms of repute are usually manufactured from good meat chopped finely by specially devised machinery. Pork and beef sausages are favourite articles of diet. They are easily cooked, but are no more nutritious than ordinary meat. Finely-minced bread or meal is mixed with the meat, and when salt, pepper, and flavouring agents, such as spices or herbs, have been added, special machines are utilized to stuff the mass into casings of intestines. Intestines in large quantities packed in salt are imported to this country for sausage-making. It is obviously necessary to inspect such intestines in order to be assured of their freshness and cleanliness. Gut-cleaning is a most offensive process, calling for careful control, and those who clean guts are not always very careful in their methods.

Odd bits of meat, and scrapings from bones, are very commonly utilized for filling sausages. Such meat may be unwholesome. Amongst butchers very emaciated carcasses of cattle are known as 'mincers,' their meat not being saleable in bulk, but suitable for chopping up into mince, as such, or for sausage-filling.

Cheap sausages should be looked upon with suspicion, since those made of good meat cannot be profitably sold at very low rates. Sausages made of horse-flesh may be, and probably are, imported into this country. The advantage of horse-flesh for sausage-making is that it provides a firm filling, and it is inexpensve. The objection to horse-meat as a food is sentimental. Any danger to be apprehended from horse-meat sausages lies in the fact that the flesh may have been taken from a diseased animal. In France and

Germany, and to a certain extent also in America, the numbers of shops for the sale of horse-flesh are increasing.

If sausages made of horse-flesh are steeped in hot water, the characteristic sickly odour will be detected. A more accurate test is the following : About 200 grammes of meat are boiled in 200 c.c. of water for an hour. After cooling, 10 c.c. of strong nitric acid are added. Filtration through paper then follows. Some of the filtrate is then tested with freshly-prepared iodine solution, taking care that the liquids do not mix. If horse-meat be present, a reddish-violet zone will appear at the junction of the two fluids. The reaction depends upon the presence of glycogen in horse-flesh. Since glycogen is also to be found in liver substance, meat-extracts and young veal, the test is unreliable. Dextrine from starchy substances added to sausages also gives the glycogen iodine reaction. In order to avoid the possibility of error, it has been found necessary to add acetic acid during the boiling process, and to employ a 10 per cent. solution of iodine with potassium iodide.

Tinned Foods.—The well-known Chicago meat scandals gave tinned foods a strong set-back in popular favour.

That these foods were not always carefully prepared was demonstrated by the production at the Leith Public Health Offices of a tin of mince-collops which, when opened, contained a substantial piece of rag, evidently used to protect a packer's finger. Doubtless exaggerated accounts were circulated regarding the unsatisfactory methods employed in connexion with meat-packing establishments. The interest and attention aroused by the 'scandals' have prompted more effective legislation towards the control of the huge American establishments in which meat is collected and prepared for tinning. But attention must not be confined to America alone. Supervision of meat-preparing factories in this country is also necessary.

The quality of the meat used, as well as the construction and sanitation of the work-places, call for strict supervision. The obstacle to efficient control is that one cannot with certainty detect diseased conditions in tinned meat. That being so, it is necessary that all possible chance of trafficking in diseased or inferior foodstuffs be guarded against. Apart from the risks attached to the consumption of tinned meat derived from unhealthy animals, there remains the danger of poisoning by ptomaines. When meat is sold

in tins, suspicion must at once be aroused if the receptacle shows bulging at one or both ends. Bulging indicates the existence of decomposition, with gas formation. When presenting this appearance, tins are said to be 'blown.' If the tin be punctured, there will be an immediate escape of gas. One will observe a spot of solder on one or other end of all tins containing meat, fish, etc. This drop of solder is placed over a small aperture through which steam has escaped during the preparation of the food after being put in tins. As soon as the tins with their contents have been removed from the heating-tank, solder is used to block up the opening referred to. With the gradual cooling of the tin-contents, a vacuum is formed inside the tin, this vacuum showing itself by the concavity at the top and bottom ends.

If the tin should be 'blown,' the retailer may permit the escape of any generated gas by perforating the tin, and, after reheating, closing the new opening made. Any evidence of a second soldering should be viewed with suspicion. The liquefaction of the jelly inside the tin is another suspicious feature, especially if, in addition, the meat possesses a disagreeable odour.

The various substances used for the preservation of milk—boric acid, etc.—may also be found among tinned foods. Their presence must be held to be a contravention of the Food and Drugs Acts, and the tinned foods confiscated.

The farm produce with which the food inspector has to deal consists, apart from living animals, of milk, butter, cheese, and eggs.

Large quantities of butter are now imported from the Continent, and may be found to be adulterated with animal fat, excess of water, salt, and preservatives.

Butter is made by churning milk vigorously in order to break up the fat globules and bring about their coalescence. The colour of butter so prepared varies from white to yellow. When cows are fed on hay and turnips the butter is white; grass-fed cows, as well as those supplied with oil-cake, yield butter of a bright yellow colour. This colour is preferred by the purchaser as a rule, and in order to meet the demand, annatto and other dyes are added. The dyes generally used are harmless, and of vegetable origin. Like milk, butter is readily absorbent. This knowledge is made use of

to improve the flavour of butter by leaving it in close proximity to flowering plants giving off fragrant odours.

Salt is added to butter to improve its flavour and to aid its keeping qualities. An excess of salt—over 8 per cent.—may be added to increase the weight of butter. An amount of water exceeding 16 per cent. is now held to constitute adulteration. The commonest fraud is the mixture of butter with animal or other fats, or the admixture of foreign fat with milk, in order to imitate the taste and appearance of genuine butter. In order to encourage the retention of an excess of water in butter, gelatin or glucose may be added, the latter acting as a preservative. Innumerable names have been employed to advertise butter substitutes, most of which consist of foreign fats.

Margarine is made from animal fat, usually taken from the omentum and mesentery of cattle. A large part of the food inspector's time is spent in taking samples in order to detect the substitution of margarine for butter. Also, he is expected to be on the look-out for margarine sold contrary to the provisions of the Margarine Act.

Cheese is principally made from cow's milk, though that of ewes and goats is also used. The milk may be whole or skimmed, or cream may be added to it. American cheeses are usually made from whole milk, as also are English Cheddars and Cheshires. Stilton is made from a mixture of milk and cream. Cream cheese consists of a rich curd which has not been put through the ripening process necessary in cheese-making. Adulteration of cheese is effected by the substitution of lard for the proper kind of fat, lard and skimmed milk being used. Bean meal and potatoes have been also used as adulterants. The use of preservatives in cheese may also be expected, especially in skimmed milk cheeses. The use of vegetable colouring matters does not constitute injurious adulteration. Tyrotoxicon (ptomaine) poisoning has been traced to the eating of unwholesome cheese. This form of poisoning has also been associated with the consumption of milk and ice-cream.

Eggs are imported in large quantities, the trade between Russia and this country being very extensive. Denmark and Holland also furnish big consignments. Eggs that have been delayed in transit or kept for unduly long periods, as well as

those that have been broken before being placed in preservative fluids or other coverings, may demand seizure and condemnation. Old eggs when held up to the light are translucent at their ends, fresh eggs at their centres. A test solution commonly employed is made by dissolving 2 ounces of salt in 1 pint of water. In this, bad or inferior eggs float ; good eggs, on the other hand, sink.

CHAPTER XVI

PROSECUTIONS

Various Examples

A PERUSAL of the following condensed cases bearing upon foods will enable the student to appreciate how fraud is punished, as well as the manner in which food-stuffs are occasionally tampered with or sold to the prejudice of the purchaser.

Condensed Milk.—This was an appeal case in the King's Bench, Dublin, in May, 1906, before Chief Justice Baron, Mr. Justice Johnson, and Mr. Justice Boyd. An inspector under the Food and Drugs Acts asked for a tin of condensed milk, but was, without explanation by the vendor, given a tin of 'condensed machine-skimmed milk.' On analysis, the latter was found to contain only 1·4 per cent. of fat, in place of 9 per cent. expected in ordinary condensed milk. Proceedings were taken against the vendor, who was fined. An appeal was made on the ground that, though not informed of the fact, the inspector could, by reading the label on the tin, have satisfied himself that he was purchasing 'condensed machine-skimmed milk,' and that the sale was not to the prejudice of the purchaser. The appeal court upheld the decision already given on the ground that the article supplied was not that known as 'condensed milk.'

Butter (Dutch Butter).—A butter merchant was summoned at the Mansion House Police Court for importing butter which was adulterated with 18 per cent. of foreign fat. For the defence it was urged that the merchant had safe-guarded himself by being armed with a warranty to the effect that the article sold was pure creamery butter. Sir Alfred Newton fined the accused, and told

him that such a warranty provided a false sense of security, and that goods sent must be ascertained to be of the quality described when sold to the public.

Butter.—An analogous case was tried at Mistley Petty Sessions at the instigation of an officer of H.M. Customs. The merchant was fined for selling Dutch produce containing foreign fat.

Butter containing 60 Grains of Boric Acid per Pound.—A provision merchant sold such butter from a box branded 'Fresh Butter, French Produce. Guaranteed Pure.' He was fined, and informed that if he sold such stuff, he alone must accept responsibility.

Butter.—A merchant who had been previously convicted was fined £50 and costs at West London Police Court for having sold pure margarine as butter. The defence set up was that a careless shop-assistant was to blame.

Spinach.—At the Marlborough Police Court a vegetable meat company was summoned for selling spinach containing 2·68 grains of copper sulphate to the pound of spinach. For the defence it was held that the copper was added to maintain the bright colour of the vegetable. It was, however, pointed out that a Parliamentary Commission had, after due consideration, recommended that no sulphate of copper should be added to preserve vegetables. The company, having been previously fined for the addition of copper to peas, was punished for the spinach adulteration.

Coffee.—A firm was fined at Aston Police Court for selling coffee containing 70 per cent. of chicory when coffee was asked for by the sampling official.

Cocoa.—A grocer was fined at Westminster Police Court for selling cocoa which contained 25 per cent. of starch and 35 per cent. of sugar. A careless assistant was blamed, in extenuation, by the defence, but in vain, as the master was held to be responsible for the acts of his servants.

Meat.—A butcher was fined for exposing diseased meat which was intended for human food. The meat seized consisted of four quarters of beef, eight pieces of ribs of beef, and the carcasses of two sheep. For the prosecution it was held that the meat was discoloured, slimy, and stinking, its colour being green. The meat had originally been frozen.

Milk of Newly-calved Cows.—The Board of Agriculture, asked to give its opinion on the point, has declared that selling the milk of newly-calved cows constitutes an offence under Section 6 of the Sale of Food and Drugs Act, 1875—that is, it is not of the 'nature, substance, and quality of the article demanded.'

Glucose in Jam.—It was held by Sheriff Mackenzie in Glasgow that the presence of glucose in jam did not constitute an offence, there being no standard for jam, and glucose was not a deleterious substance.

Polluted Oysters.—A large quantity of these was seized at a railway-station. Samples were submitted to Dr. Klein, who reported that the oysters were unsound, unwholesome, and unfit for human consumption, because they had been contaminated by sewage.

Cream containing Boric Acid.—At Kingston a merchant was tried for selling cream which contained 0·11 per cent. of boric acid. There was no label on the jar in which the cream was sold. The summons was dismissed on payment of costs, but the merchant was advised in future to sell jar cream labelled to indicate the addition of a preservative.

Tinned Foods.—Sulphites were found by the Borough Analyst of Paddington in chicken and veal pâté tins from Chicago. Apricots and tomatoes in tins from California and Bordeaux also contained sulphites. A fine was imposed.

A fine was inflicted at Brentford upon a firm for having sold several tins of potted chicken and tongue, chicken and ham, and ham. It was maintained and held that where sterilization was satisfactory there was no need to add preservatives.

Sardines.—A grocer was fined at Thames Police Court for having exposed for sale three tins of sardines which were 'blown' and their contents unfit for human food.

Shrimps.—Dutch shrimps are imported to this country in bottles. A firm was convicted for selling such shrimps, which had large quantities of boric acid added to them as preservatives. It is the usual practice to add no more than 35 grains of boric acid to the pound of shrimps.

THE LAWS RELATING TO FOOD INSPECTION

WITH FOOTNOTES BY

R. H. MILLER, Esq., S.S.C.,

PUBLIC PROSECUTOR FOR LEITH LOCAL AUTHORITY

PUBLIC HEALTH (LONDON) ACT, 1891

SECTION 17.

(1) A person shall not—

(*a*) Feed or keep any swine in any locality, premises,[1] or place which is unfit for the keeping of swine, or in which the feeding or keeping of swine may create a nuisance[2] or be injurious to health ; or

(*b*) Permit any swine to stray or go about in any street[3] or public place.[4]

(2) If any person acts in contravention of this section, he shall be liable to a fine not exceeding forty shillings, and to forfeit the swine, and to a further fine not exceeding ten shillings for every day

[1] For definition of ' premises,' see Section 141.

[2] As to the meaning of the word ' nuisance,' see *Great Western Railway Company* v. *Bishop*, L.R., 7 Q.B., 550, where it was held, as to the corresponding words in 18 and 19 Vict., c. 121, s. 8, that, the Act being a sanitary one, ' nuisance ' applied only to such nuisances as were injurious to health, and did not include a nuisance caused by rain-water dropping from a railway-bridge on to a public footpath below. See also *The Malton Board of Health* v. *Malton Manure Company*, 4 Ex.D., 320, where it was held that an effluvium which caused sick persons to become worse amounted to a nuisance within the meaning of the section then under consideration, although it was not proved to be injurious to healthy persons ; and in the *Banbury U.S.A.* v. *Page*, 8 Q.B.D., 97, the term ' nuisance ' was held to include matters substantially offensive to the senses. See also *The Bishop Auckland L.B.* v. *The Bishop Auckland Iron Company*, 10 Q.B.D., 138, where it was decided (under Section 91 (4) of 38 and 39 Vict., c. 55) that the words ' nuisance or injurious to health ' do not mean ' nuisance injurious to health,' but a nuisance either interfering with personal comfort or injurious to health. In that case, certain heaps of burning cinders and ashes were proved to have caused offensive smells interfering with personal comfort, though not causing injury to health.

[3] For definition of ' street,' see Section 141.

[4] As to the meaning of the words ' public place,' see the following cases : *Case* v. *Storey*, L.R., 4 Ex., 319 ; *Skinner* v. *Usher*, L.R., 7 Q.B., 423 ; *Curtis* v. *Embery*, L.R., 7 Ex., 369 ; *Ex parte Freestone*, 25 L.J.M.C., 121 ; *Langlish* v. *Archer*, 10 Q.B.D., 44 ; *R.* v. *Thallman*, L.& C., 326 ; *R.* v. *Wellard*, 14 Q.B.D., 63. From a perusal of these cases, it appears that the term ' public place ' must be interpreted with reference to the nature of the offences in connexion with which it is used.

during which he continues such offence after notice from the sanitary authority to discontinue the same.

(3) Any swine found straying or going about in any street or public place may be seized and removed by any constable.

(4) Any premises within forty yards of any street or public place[1] shall be deemed for the purposes of this section to be a place unfit for keeping swine.

SECTION 18.

Where it is proved to the satisfaction of a petty sessional court[2] that any locality, premises, or place are or is unfit for the keeping of any animal, the court may, by summary order, prohibit the using thereof for that purpose for the future.

SECTION 20.

(1) A person[3] carrying on the business of a slaughterer of cattle or horses,[4] knacker, or dairyman,[5] shall not use any premises in London (outside the City of London) as a slaughter-house, or knacker's yard, or a cow-house or place for the keeping of cows, without a licence from the county council, and if he does he shall for each offence be liable to a fine not exceeding five pounds, and the fact that cattle have been taken into unlicensed premises shall be *prima facie* evidence that an offence under this section has been committed.

(2) A licence under this section shall expire on such day in every year as the county council fix, and when a licence is first granted shall expire on the day so fixed which secondly occurs after the grant of the licence, and a fee not exceeding five shillings, to be carried to the county fund, may be charged for the licence.

(3) Not less than fourteen days before a licence for any premises is granted or renewed under this section notice[6] of the intention to apply for it shall be served on the sanitary authority of the district in which the premises are situate, and that sanitary authority, if they think fit, may show cause against the grant or renewal of the licence.

[1] See Interpretation Act, 1889, 52 and 53 Vict., c. 63, s. 34.

[2] See Interpretation Act, 1889, 52 and 53 Vict., c. 63, s. 13.

[3] 'Person' includes persons or bodies of persons, whether corporate or unincorporate (52 and 53 Vict., c. 63, ss. 1, 2, 19).

[4] See Section 141 for definition.

[5] See Section 141. A farmer who kept cows for his own use, and supplied two dairymen with a few quarts of milk, is not a 'trader or cowkeeper' within s. 34 of 41 and 42 Vict., c. 74 (reproduced in this section) (*Southend* v. *Lewis*, 45 J.P., 206).

[6] As to the service of notices, see Sections 127, 128.

(4) An objection shall not be entertained to the renewal of a licence under this section, unless seven days' previous notice of the objection has been served on the applicant, save that, on an objection being made of which notice has not been given, the county council may, if they think it just so to do, direct notice thereof to be served on the applicant, and adjourn the question of the renewal to a future day, and require the attendance of the applicant on that day, and then hear the case, and consider the objection, as if the said notice had been duly given.

(5) Where a committee of the county council determine to refuse, or to recommend the council to refuse, the renewal of any licence under this section, the county council shall, on written application made within seven days after such determination is made known to the applicant, hear the applicant against any such refusal.

(6) For the purposes of this section a licence shall be deemed to be renewed where a further licence is granted in immediate succession to a prior licence for the same premises.

(7) The sanitary authority shall have a right to enter[1] any slaughter-house or knacker's yard at any hour by day or at any hour when business is in progress or is usually carried on therein, for the purpose of examining whether there is any contravention therein of this Act or of any by-law made thereunder.

(8) Nothing in this section shall extend to slaughter-houses erected before or after the commencement of this Act in the Metropolitan Cattle Market under the authority of the Metropolitan Market Act, 1851, or the Metropolitan Market Act, 1857.

SECTION 28.

(1) The Local Government Board may make such general or special orders as they think fit for the following purposes, or any of them—that is to say—

(*a*) For the registration with the county council of all persons carrying on the trade of dairymen ;

(*b*) For the inspection of cattle in dairies, and for prescribing and regulating the lighting, ventilation, cleansing, drainage, and water-supply of dairies in the occupation of persons carrying on the trade of dairymen ;

(*c*) For securing the cleanliness of milk vessels used for containing milk for sale by such persons ;

(*d*) For prescribing precautions to be taken for protecting milk against infection or contamination ;

(*e*) For authorizing the county council to make by-laws for the purposes aforesaid, or any of them.

[1] See Section 115.

(2) The county council, for the purpose of enforcing the said orders and any by-laws made thereunder, shall have the same right to be admitted to any premises as a sanitary authority have under this Act for the purpose of examining as to the existence of a nuisance liable to be dealt with summarily, and the provisions of this Act shall apply accordingly as if they were herein re-enacted and in terms made applicable to this section, and in particular with the substitution of the county council for the sanitary authority.

(3) The Local Government Board may by any such order impose the like fines for offences against orders made under this section as may be imposed for offences against the by-laws of a sanitary authority under this Act.

(4) In the application of this section to the City of London the mayor, commonalty, and citizens of the city acting by the council shall be substituted for the county council, and their expenses in the execution of this section shall be paid out of the consolidated rate.

SECTION 36.

(1) The sanitary authority, if they think fit, may employ a sufficient number of scavengers, or contract with any scavengers, whether a company or individuals, for collecting and removing the manure and other refuse-matter from any stables and cow-houses within their district, the occupiers of which signify their consent in writing to such removal; provided that—

(*a*) Such consent shall not be withdrawn or revoked without one month's previous notice to the sanitary authority; and

(*b*) No person shall be hereby relieved from any fine to which he may be subject for placing dung or manure upon any footways or carriageways, or for having any accumulation or deposit of manure or other refuse-matter so as to be a nuisance or injurious or dangerous to health.[1]

(2) Notice may be given by a sanitary authority (by public announcement in the district or otherwise) requiring the periodical removal of manure or other refuse-matter from stables, cow-houses, or other premises; and, where any such notice has been given, if any person to whom the manure or other refuse-matter belongs fails to comply with the notice, he shall be liable without further notice to a fine not exceeding twenty shillings for each day during which such non-compliance continues.

[1] As to what may be held to be nuisances, see *Margate Pier and Harbour Company* v. *Margate L.B.*, 20 L.T., 564 (accumulations of seaweed); *Draper* v. *Speering*, 30 L.J.M.C., 225 (sheep droppings at a market); *Mayor of Scarborough* v. *R.S.A. of Scarborough*, 1 Ex.D., 349 (ashes and refuse left in a field).

SECTION 47.

(1) Any medical officer of health or sanitary inspector may at all reasonable times[1] enter any premises and inspect and examine—

(*a*) Any animal[2] intended for the food[3] of man which is exposed[4] for sale, or deposited in any place for the purpose of sale, or of preparation for sale ; and

(*b*) any article, whether solid or liquid, intended for the food of man, and sold or exposed for sale, or deposited in any place for the purpose of sale or of preparation for sale ;

the proof that the same was not exposed or deposited for any such purpose, or was not intended for the food of man, resting with the person charged ; and if any such animal or article appears to such medical officer or inspector to be diseased, or unsound, or unwholesome, or unfit for the food of man, he may seize and carry away the same himself or by an assistant, in order to have the same dealt with by a justice.

(2) If it appears to a justice that any animal or article which has been seized or is liable to be seized under this section is diseased, or unsound, or unwholesome, or unfit for the food of man, he shall condemn the same, and order it to be destroyed, or so disposed of as to prevent it from being exposed for sale or used for the food of man ; and the person to whom the same belongs, or did belong at the time of sale or exposure for sale, or deposit for the purpose of sale or of preparation for sale, or in whose possession or on whose premises the same was found, shall be liable, on summary conviction, to a fine not exceeding fifty pounds for every animal or article, or if the article consists of fruit, vegetables, corn, bread, or flour, for every parcel thereof so condemned, or, at the discretion

[1] See Section 115. If circumstances justify it, entry may be made on a Sunday (*Small* v. *Bickley*, 32 L.T., 726).

[2] Live animals are within the similar words of Sections 116, 117 of the Public Health Act (*Moody* v. *Leach*, 44 J.P., 459). It was also held in that case that the mere fact of an animal being found on licensed premises adjoining a slaughter-house was not conclusive evidence of its being intended to be used as human food.

[3] It is a nuisance at common law to expose for sale food which is unfit for human consumption (*Shilleto* v. *Thompson*, 1 Q.B.D., 12 ; *R.* v. *Stevenson*, 3 F. & F., 106).

[4] A. was summoned for *unlawfully exposing* for sale food which was unsound. At the time of such exposure A. was out of the town where his shop was. The summons was dismissed, and a certificate of dismissal granted. Upon the same facts a new summons was taken out, but charging A. with *having on his premises* unsound meat *exposed* for sale. He was convicted, and the conviction, on appeal, was quashed, when it was held that, as a conviction could have been made on the first summons, a conviction on the second was bad (*R.* v. *Blound*, 43 J.P., 383).

of the court, without the infliction of a fine, to imprisonment for a term of not more than six months, with or without hard labour.

(3) Where it is shown that any article liable to be seized under this section, and found in the possession of any person, was purchased by him from another person for the food of man, and when so purchased was in such a condition as to be liable to be seized and condemned under this section, the person who so sold the same shall be liable to the fine and imprisonment above mentioned, unless he proves that at the time he sold the said article he did not know, and had no reason to believe, that it was in such condition.

(4) Where a person convicted of an offence under this section has been within twelve months previously convicted of an offence under this section, the court may, if it thinks fit, and finds that he knowingly and wilfully committed both such offences, order that a notice of the facts be affixed, in such form and manner, and for such period not exceeding twenty-one days, as the court may order, to any premises occupied by that person, and that the person do pay the costs of such affixing; and if any person obstructs the affixing of such notice, or removes, defaces, or conceals the notice while affixed during the said period, he shall for each offence be liable to a fine not exceeding five pounds.

(5) If the occupier of a licensed slaughter-house is convicted of an offence under this section, the court convicting him may cancel the licence for such slaughter-house.

(6) If any person obstructs an officer in the performance of his duty under any warrant for entry into any premises granted by a justice in pursuance of this Act for the purposes of this section, he shall, if the court is satisfied that he obstructed with intent to prevent the discovery of an offence against this section, or has within twelve months previously been convicted of such obstruction, be liable to imprisonment for any term not exceeding one month in lieu of any fine authorized by this Act for such obstruction.

(7) A justice may act in adjudicating on an offender under this section, whether he has or has not acted in ordering the animal or article to be destroyed or disposed of.

(8) Where a person has in his possession any article which is unsound, or unwholesome, or unfit for the food of man, he may, by written notice to the sanitary authority, specifying such article, and containing a sufficient identification of it, request its removal, and the sanitary authority shall cause it to be removed as if it were trade refuse.

SECTION 71.

(1) If the medical officer of health of any district has evidence that any person in the district is suffering from a dangerous infectious disease attributable to milk supplied within the district from any

dairy[1] situate within or without the district, or that the consumption of milk from such dairy is likely to cause any such infectious disease to any person residing in the district, such medical officer shall, if authorized by an order of a justice having jurisdiction in the place where the dairy is situate, have power to inspect the dairy, and if accompanied by a veterinary inspector or some other properly qualified veterinary surgeon, to inspect the animals therein; and if, on such inspection, the medical officer of health is of opinion that any such infectious disease is caused from consumption of the milk supplied therefrom, he shall report thereon to the sanitary authority, and his report shall be accompanied by any report furnished to him by the said veterinary inspector or veterinary surgeon, and the sanitary authority may thereupon serve on the dairyman notice[2] to appear before them within such time, not less than twenty-four hours, as may be specified in the notice, to show cause why an order should not be made requiring him not to supply any milk therefrom within the district until the order has been withdrawn by the sanitary authority.

(2) The sanitary authority, if in their opinion he fails to show such cause, may make the said order, and shall forthwith serve notice of the facts on the county council of the county in which the dairy is situate, and on the Local Government Board, and, if the dairy is situate within the district of another sanitary authority, on such authority.

(3) The said order shall be forthwith withdrawn on the sanitary authority or their medical officer of health on their behalf being satisfied that the milk-supply has been changed, or that the cause of the infection has been removed.

(4) If any person refuses to permit the medical officer of health, on the production of a justice's order under this section, to inspect any dairy, or if so accompanied as aforesaid, to inspect the animals kept there, or, after any such order has been made, supplies any milk within the district in contravention of the order, or sells it for consumption therein, he shall, on the information of the sanitary authority, be liable to a fine not exceeding five pounds, and, if the offence continues, to a further fine not exceeding forty shillings for every day during which the offence continues.

(5) Provided that—

(*a*) Proceedings in respect of the offence shall be taken before a court having jurisdiction in the place where the dairy is situate; and

(*b*) A dairyman shall not be liable to an action for breach of contract if the breach be due to an order under this section.

[1] For definition of the terms 'dairy' and 'dairyman,' see Section 141.
[2] As to service of notices, see Section 128.

(6) Proceedings may be taken under this section in respect of a dairy in the district of a local authority under the Public Health Acts, and the notice of the facts shall be served on the local authority as if they were a sanitary authority within the meaning of this Act.

(7) Nothing in or done under this section shall interfere with the operation or effect of the Contagious Diseases (Animals) Acts, 1878 to 1886, or this Act, or of any order, licence, or act of the Board of Agriculture or the Local Government Board thereunder, or of any order, by-law, regulation, licence, or act of a local authority made, granted, or done under any such order of the Board of Agriculture or the Local Government Board, or exempt any dairy, building, or thing, or any person from the provisions of any general Act relating to dairies, milk, or animals.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889

3. (1) Where an inmate of any building[1] used for human habitation within a district to which this Act extends is suffering from an infectious disease[2] to which this Act applies, then, unless such building is a hospital in which persons suffering from an infectious disease are received, the following provisions shall have effect, that is to say:

(*a*) The head of the family to which such inmate (in this Act referred to as the patient) belongs, and in his default the nearest relatives of the patient present in the building or being in attendance on the patient, and in default of such relatives every person in charge of or in attendance on the patient, and in default of any such person the occupier[3] of the building, shall, as soon as he becomes aware that the patient is suffering from an infectious disease to which this Act applies, send notice[4] thereof to the medical officer of health of the district.

(*b*) Every medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware

[1] The word 'building' includes ships, vessels, boats, tents, vans, sheds, or similar structures. See Sections 13 and 15.

[2] For diseases to which the Act applies, see Section 16.

[3] For meaning of 'occupier,' see Section 16.

[4] As to form of notices and manner of sending same, see Section 8.

that the patient is suffering from an infectious disease to which this Act applies, send to the medical officer of health for the district a certificate[1] stating the name of the patient, the situation of the building, and the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering.

(2) Every person required by this section to give a notice or certificate who fails to give the same shall be liable, on summary conviction in manner provided by the Summary Jurisdiction Acts, to a fine not exceeding forty shillings ;

Provided that if a person is not required to give notice in the first instance, but only in default of some other person, he shall not be liable to any fine if he satisfies the court that he had reasonable cause to suppose that the notice had been duly given.

METROPOLIS LOCAL MANAGEMENT ACTS AMENDMENT

91. No person within any parish mentioned in Schedule A to the firstly recited Act, or in any district mentioned in Schedule B to the said Act, shall breed, feed, or keep any swine in any locality, premises, or place which may be unfit for the keeping of swine, or in which the breeding, feeding, or keeping of swine may create a nuisance, or be injurious to health ; and any person breeding, feeding, or keeping swine in or on any such locality, premises, or place shall be liable to a penalty not exceeding forty shillings, and to a further penalty not exceeding ten shillings for every day during which he shall continue such offence after notice from the vestry or district board to discontinue the same, and any such penalty may be recovered by a summary proceeding ; and if in any proceeding under this enactment it shall be proved to the satisfaction of the justice or justices that any such locality, premises, or place are or is unfit for the keeping of swine, such justice or justices may prohibit the using thereof for that purpose for the future ; and any person disobeying the order of any justice or justices in this behalf shall be liable to a penalty of ten shillings for every day during such his default.

92. The one hundred and thirty-first section of the firstly recited Act, and the thirty-fifth section of The Metropolitan Market Act,

[1] As to form of certificate, see Section 4 ; and as to how the certificate is sent, Section 8.

1857 (twentieth and twenty-first Victoria, chapter one hundred and thirty-five) (Local and Personal), are repealed ; but all licences granted in pursuance of the provisions in the said repealed sections contained shall continue in force for the space of one year next after the day of the granting of the same respectively, and all offences heretofore committed against the provisions of the said Acts, or either of them, in relation to slaughter-houses, shall be dealt with in every respect as if this Act had not been passed.

93. From and after the first day of November, one thousand eight hundred and sixty-two, no place within any parish or place mentioned in the schedules to the firstly recited Act shall be used by any person carrying on the business of a slaughterer of cattle or cow-keeper or dairyman as a slaughter-house for the purpose of slaughtering cattle or a cow-house or place for the keeping of cows, without a licence had for such purpose respectively from the justices of the peace assembled at a special sessions held in the division or district where such slaughter-house, cow-house, or place is situate, and such licence shall continue in force for the period of one year from the granting thereof, and thenceforth until the special sessions to be held next after the expiration of such period, and no fee or reward exceeding five shillings shall be taken for any such licence ; and if any person carrying on such business of a slaughterer of cattle, cowkeeper, or dairyman use as a slaughter-house or cow-house any place within any parish or place mentioned in the schedules of the firstly recited Act which is not so licensed, every person so offending shall for each offence be liable to a penalty not exceeding five pounds, of which offence the fact that cattle have been taken into such place shall be deemed sufficient *prima facie* evidence : provided always, that before any licence for the use of any place as a slaughter-house or cow-house is granted as aforesaid, fourteen days' notice of the intention to apply for such licence shall be given to the vestry or district board of the parish or district in which any such place is situate, to the intent that such vestry or district board, if they think fit, may show cause against the granting of any such licence, and also seven days' notice previous to such special sessions being held of the intention to apply for such licence shall be given to the clerk of the justices for such division : provided that nothing in this Act contained shall extend to slaughter-houses erected or to be erected in the Metropolitan Cattle Market under the authority of the Metropolitan Market Act, 1851, or the Metropolitan Market Act, 1857.

94. Before any licence for the keeping or using of any house or place within the Metropolitan police district as a licensed slaughtering-house or place for the purpose of slaughtering or killing horses or other cattle not killed for butcher's meat shall be granted by any quarter sessions of the peace under the provisions of the Act of

the session holden in the twenty-sixth year of the reign of His Majesty King George the Third, chapter seventy-one, or of the Act of the session holden in the seventh and eighth years of Her present Majesty, chapter eighty-seven, or any Act amending either of the said Acts, one month's previous notice of the intention to apply for such licence shall be given to the vestry or district board of the parish or district in which such house or place is situate, to the intent that such vestry or district board, if they think fit, may show cause against the grant of such licence.

95. It shall be lawful for every vestry and district board, if they in their discretion think fit, to appoint and employ a sufficient number of persons, or to contract with any company or persons, for collecting and removing the manure and refuse straw from such stables and cow-houses within their parish or district, the occupiers of which may signify their consent in writing to such removal; provided that such consent shall not be withdrawn or revoked without one month's previous notice to the vestry or district board, and that no person shall be hereby relieved from any penalty or penalties to which they may be subject for placing dung or manure upon the footways or carriageways of any parish or district, or for having any accumulation or deposit of manure so as to be a nuisance or injurious to health.

Unsound Meat, etc.

116. Any medical officer of health or inspector of nuisances may at all reasonable times[1] inspect and examine any animal,[2] carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk exposed for sale, or deposited in any place[3] for the purpose of sale, or of preparation for sale, and intended for the food of man, the proof that the same was not exposed or deposited for any such purpose, or was not intended for the food of man, resting with the party charged; and if any such animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk appears to such medical officer or inspector to be diseased, or unsound, or unwholesome, or unfit for the food of man, he may seize and carry away the same himself or by an assistant, in order to have the same dealt with by a justice.[4]

117. If it appears to the justice that any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk so seized is diseased, or unsound, or unwholesome, or unfit for the food of man, he shall condemn the same, and order it to be destroyed or so disposed of as to prevent it from being exposed for

[1] Sunday may be a reasonable time, according to circumstances (*Small* v. *Bickley*, 32 L.T. (N.S.), 726; 39 J.P., 422).

[2] In *Moody* v. *Leach*, 44 J.P., 459, it was held that the word 'animal' included a live animal.

[3] The word 'place' is used in a general sense (*Young* v. *Gratridge*, L.R., 4 Q.B., 166; 38 L.J.M.C., 67; 33 J.P., 260). And in *Daly* v. *Webb*, 4 Ir.Rep. C.L., 309, diseased meat placed upon a cart, when passing along the streets of the city of Dublin from a slaughter-house to a place for the manufacture of preserved meats, was held to have been properly seized under a similar section in 26 and 27 Vict., c. 117, s. 2.

[4] The medical officer or inspector must satisfy himself that the article in question is 'exposed for sale, etc.,' and if he is so satisfied he may seize. But he need not give notice to the owner of the articles seized, nor is the justice before whom the article is taken bound to summon the owner before condemning the goods (*White* v. *Redfern*, 5 Q.B.D., 15; 49 L.J.M.C., 19; 41 L.T. (N.S.), 524; 28 W.R., 168; 44 J.P., 87). The officer cannot destroy the article. He must take it to be dealt with by a justice under Section 117. If he does destroy it, he acts illegally, and the local authority will be liable in damages (*Ormerod* v. *Mayor, etc., of Rochdale*, 62 J.P., 153).

sale or used for the food of man ;[1] and the person to whom the same belongs, or did belong, at the time of exposure for sale, or in whose possession or on whose premises the same was found,[2] shall be liable to a penalty not exceeding twenty pounds for every animal, carcass, or fish, or piece of meat, flesh, or fish, or any poultry or game, or for the parcel of fruit, vegetables, corn, bread, or flour, or for the milk so condemned, or, at the discretion of the justice, without the infliction of a fine, to imprisonment for a term of not more than three months.

The justice who under this section is empowered to convict the offender may be either the justice who may have ordered the article to be disposed of or destroyed, or any other justice having jurisdiction in the place.

118. Any person who in any manner prevents any medical officer of health or inspector of nuisances from entering any premises and inspecting any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk exposed or deposited for the purpose of sale, or of preparation for sale, and intended for the food of man, or who obstructs or impedes any such medical

[1] The Justice may hear evidence tendered by owner, although the owner is not entitled as of right to give evidence in defence of the meat (*Bater and the Mayor, etc., of Birkenhead*, 1893, 2 Q.B., 77 ; 62 L.J.M.C., 107 ; 69 L.T. (N.S.), 220 ; 41 W.R., 513 ; 4 R, 438 ; 58 J.P., 7). It has been held that all the magistrate is entitled to consider, before condemning an article, is whether it is unsound or unwholesome, or unfit for human food (*Thomas* v. *Van Os*, 1900, 2 Q.B., 448 ; 69 L.J.Q.B., 665 ; 82 L.T. (N.S.), 845 ; 49 W.R., 57 ; 64 J.P., 582 ; 16 T.L.R., 388). In *Williams* v. *Marberth Sanitary Authority* (*Times*, December 7, 1882) an opinion was expressed that condemnation on day after seizure in hot weather in July was bad. But see *Burton* v. *Bradley*, 51 J.P., 118, where it was held that condemnation need not be on the same day as seizure, provided reasonable diligence is used.

As to owner's remedy for unlawful seizure, see Section 308 ; also *White* v. *Redfern*, cited in note 4 to Section 116, p. *supra ; Bater and Birkenhead*, cited in this note, *supra ; Davies and Rhondda Urban District Council*, 80 L.T. (N.S.), 696 ; *Walshaw* v. *Mayor, etc., of Brighouse*, 1899, 2 Q.B., 86 ; 68 L.J.Q.B., 828 ; 81 L.T. (N.S.), 2 ; 47 W.R., 600.

[2] In *R.* v. *Blount* it was held that a defendant who had been charged and acquitted could not be convicted under a second summons for the same offence.

Possession for sale for human food is sufficient without exposure (*Mallinson* v. *Carr*, 1891, 1 Q.B., 48 ; 60 L.J.M.C., 34 ; 39 W.R., 270 ; 55 J.P., 270). But see *Rendell* v. *Hemingway*, 14 T.L.R., 456, where it was held that a person who had unsound meat on his premises intended for food for himself and servants, but not for sale, could not be convicted. See also *Barlow* v. *Terrett*, 1891, 2 Q.B., 107 ; 60 L.J.M.C., 104 ; 65 L.T. (N.S.), 148 ; 39 W.R., 640 ; 55 J.P., 632.

Upon the hearing of a summons under this section, it is not necessary to show that the defendant had personal knowledge of the condition of the meat seized (*Blaker* v. *Tillstone*, 1894, 1 Q.B., 345 ; 63 L.J.M.C., 72 ; 70 L.T. (N.S.), 31 ; 42 W.R., 253 ; 58 J.P., 184 ; 10 T.L.R., 178 ; 10 R., 94.

A defendant may call evidence to show that the meat condemned was not, in fact, unsound (*Waye* v. *Thompson*, 15 Q.B.D., 342 ; 54 L.J.M.C., 140 ; 53 L.T (N.S.), 358 ; 33 W.R., 733 ; 49 J.P., 693.

officer, or inspector, or his assistant, when carrying into execution the provisions of this Act, shall be liable to a penalty not exceeding five pounds.

119. On complaint made on oath by a medical officer of health, or by an inspector of nuisances, or other officer of a local authority, any justice may grant a warrant to any such officer to enter any building or part of a building in which such officer has reason for believing that there is kept or concealed any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk which is intended for sale for the food of man, and is diseased, unsound, or unwholesome, or unfit for the food of man; and to search for, seize and carry away any such animal or other article in order to have the same dealt with by a justice under the provisions of this Act.

Any person who obstructs any such officer in the performance of his duty under such warrant shall, in addition to any other punishment to which he may be subject, be liable to a penalty not exceeding twenty pounds.

Markets and Slaughter-houses.

166. Where an urban authority are a local board or improvement commissioners, they shall have power, with the consent of the owners and ratepayers of their district, expressed by resolution passed in manner provided in Schedule III. to this Act, and where the urban authority are a town council they shall have power, with the consent of two-thirds of their number, to do the following things, or any of them, within their district:

To provide a market-place, and construct a market-house and other conveniences, for the purpose of holding markets;
To provide houses and places for weighing carts;
To make convenient approaches to such market;
To provide all such matters and things as may be necessary for the convenient use of such market;
To purchase or take on lease land, and public or private rights in markets and tolls for any of the foregoing purposes;
To take stallages, rents, and tolls in respect of the use by any person of such market;

but no market shall be established in pursuance of this section so as to interfere with any rights, powers, or privileges enjoyed within the district by any person without his consent.

167. For the purpose of enabling any urban authority to establish or to regulate markets, there shall be incorporated with this Act the provisions of the Markets and Fairs Clauses Act, 1847, in so far as the same relate to markets—that is to say:

With respect to the holding of the market or fair, and the protection thereof ; and
With respect to the weighing goods and carts ; and
With respect to the stallages, rents, and tolls ;

provided that all tolls leviable by an urban authority in pursuance of this section shall be approved by the Local Government Board.

An urban authority may with respect to any market belonging to them make by-laws for any of the purposes mentioned in Section 42 of the Markets and Fairs Clauses Act, 1847, so far as those purposes relate to markets, and printed copies of any by-laws so made shall be conspicuously exhibited in the market.

168. Any urban authority may purchase, and the directors of any market company, in pursuance, in the case of a company registered under the Companies Act, 1862, of a special resolution of the members passed in manner provided by the Act, and in that case of any other company, of a resolution passed by a majority of three-fourths in number and value of the members present, either personally or by proxy, at a meeting specially convened with notice of the business to be transacted, may sell and transfer to any urban authority, on such terms as may be agreed on between the company and the urban authority, all the rights, powers, privileges, and all or any of the markets, premises, and things which at the time of such purchase are the property of the company, but subject to all liabilities attached to the same at the time of such purchase.

169. Any urban authority may, if they think fit, provide slaughter-houses, and they shall make by-laws with respect to the management and charges for the use of any slaughter-houses so provided.

For the purpose of enabling any urban authority to regulate slaughter-houses within their district, the provisions of the Towns Improvement Clauses Act, 1847, with respect to slaughter-houses shall be incorporated with this Act.

Nothing in this section shall prejudice or affect any rights, powers or privileges of any persons incorporated by any local Act passed, before the passing of the Public Health Act, 1848, for the purpose of making and maintaining slaughter-houses.

Notice to be affixed on Slaughter-houses.

170. The owner or occupier of any slaughter-house licensed or registered under this Act shall, within one month after the licensing or registration of the premises, affix, and shall keep undefaced and legible on some conspicuous place on the premises, a notice with the words ' Licensed Slaughter-house,' or ' Registered Slaughter-house,' as the case may be.

Any person who makes default in this respect, or who neglects or refuses to affix or renew such notice after requisition in writing from the urban authority, shall be liable to a penalty not exceeding five pounds for every such offence, and of ten shillings for every day during which such offence continues after conviction.

INFECTIOUS DISEASE (PREVENTION) ACT, 1890

4. In case the medical officer of health is in possession of evidence that any person in the district is suffering from infectious disease attributable to milk supplied within the district from any dairy situate within or without the district, or that the consumption of milk from such dairy is likely to cause infectious disease to any person residing in the district, such medical officer shall, if authorized on that behalf by an order of a justice having jurisdiction where such dairy is situate, have power to inspect such dairy, and if accompanied by a veterinary inspector or some other properly qualified surgeon, to inspect the animals therein; and if on such inspection the medical officer of health shall be of opinion that infectious disease is caused by consumption of the milk supplied therefrom, he shall report thereon to the local authority, and his report shall be accompanied by any report furnished to him by the said veterinary surgeon or inspector, and the local authority may thereupon give notice to the dairyman to appear before them within such time—not less than twenty-four hours—as may be specified in the notice, to show cause why an order should not be made requiring him not to supply any milk therefrom within the district until such order has been withdrawn by the local authority; and if, in the opinion of the local authority, he fails to show such cause, then the local authority may make such order as aforesaid; and the local authority shall forthwith give notice of the facts to the sanitary authority and county council (if any) of the district or county in which such dairy is situate, and also to the Local Government Board. An order made by a local authority in pursuance of this section shall be forthwith withdrawn on the local authority or the medical officer of health on its behalf being satisfied that the milk-supply has been changed, or that the cause of the infection has been removed. Any person refusing to permit the medical officer of health, on the production of such order as aforesaid, to inspect any dairy, or if so accompanied as aforesaid to inspect the animals kept there, or after any such order not to supply

milk as aforesaid has been given, supplying any milk within the district in contravention of such order, or selling it for consumption therein, shall be deemed guilty of an offence under the Act. Provided always that proceedings in respect of such offence shall be taken before the justices of the peace having jurisdiction in the place where the dairy is situate ; provided, also, that no dairyman shall be liable to an action for breach of contract if the breach be due to an order from the local authority under this Act.

PUBLIC HEALTH AMENDMENT ACT, 1890 (ADOPTIVE) (ENGLAND AND WALES)

28. (1) Sections 116 to 119 of the Public Health Act, 1875 (relating to unsound meat), shall extend and apply to all articles intended for the food of man, sold, or exposed for sale, or deposited in any place for the purpose of sale, or of preparation for sale, within the district of any local authority.

(2) A justice may condemn any such article, and order it to be destroyed or disposed of, as mentioned in Section 116 of the Public Health Act, 1875, if satisfied, on complaint being made to him, that such article is diseased, unsound, unwholesome, or unfit for the food of man, although the same has not been seized as mentioned in Section 116 of the said Act.

29. Licences granted after the adoption of this part of this Act for the use and occupation of places as slaughter-houses shall be in force for such time or times only, not being less than twelve months, as the urban authority shall think fit to specify in such licences.

30. (1) Upon any change of occupation of any building within an urban sanitary district registered or licensed for use and used as a slaughter-house, the person thereupon becoming the occupier or joint occupier shall give notice in writing of the change of occupation to the inspector of nuisances.

(2) A person who fails or neglects to give such notice within one month after the change of occupation occurs shall be liable to a penalty not exceeding five pounds.

(3) Notice of this enactment shall be endorsed on all licenses granted after the adoption of this part of this Act.

31. If the occupier of any building licensed as aforesaid to be used as a slaughter-house for the killing of animals intended as human food is convicted by a court of summary jurisdiction of

selling, or exposing for sale, or for having in his possession, or on his premises, the carcass of any animal, or any piece of meat or flesh diseased, or unsound, or unwholesome, or unfit for the use of man as food, the court may revoke the licence.

CONTAGIOUS DISEASES (ANIMALS) ACT, 1878

34. The Privy Council may from time to time make such general or special orders as they think fit, subject and according to the provisions of this Act, for the following purposes, or any of them :

(i.) For the registration with the local authority of all persons carrying on the trade of cow-keepers, dairymen, or purveyors of milk.

(ii.) For the inspection of cattle in dairies, and for prescribing and regulating the lighting, ventilation, cleansing, drainage, and water-supply of dairies and cow-sheds in the occupation of persons following the trade of cow-keepers or dairymen.

(iii.) For securing the cleanliness of milk-stores, milk-shops, and of milk-vessels used for containing milk for sale, by such persons.

(iv.) For prescribing precautions to be taken for protecting milk against infection or contamination.

(v.) For authorizing a local authority to make regulations for the purposes aforesaid or any of them, subject to such conditions, if any, as the Privy Council prescribe.

CONTAGIOUS DISEASES (ANIMALS) ACT, 1886

9. (1) Transfers powers from Privy Council (mentioned in previous Act) to Local Government Board.

(2) The term ' local authority ' in the Metropolis, unless the context otherwise requires, has the same meaning as in the principal Act, and elsewhere has the same meanings as in the Public Health Act, 1875.

(3) Expenses incurred by a local authority in the Metropolis in pursuance of Section 34 of the principal Act, as amended by this section, shall be defrayed out of the local rate applicable to their expenses under the principal Act ; and any expenses so incurred by any other local authority shall be defrayed as if they were incurred in the execution of the Public Health Act, 1875, and in the case of a rural sanitary authority, shall be deemed to be general expenses.

(4) Officers of the local authority, for the purpose of enforcing the said orders, shall have the same rights of entry as are afforded by the Public Health Act, 1875, with penalties for refusing admission, etc.

(5) Penalties granted may be recovered.

(6) (*a*) The Dairies, Cowsheds, and Milkshops Order of 1885, and any regulations thereunder, or having effect in pursuance thereof, made by any local authority under the principal Act, other than the local authority of a county, shall be deemed to have been made respectively by the Local Government Board and by a local authority under this section ; and any such regulations made by the local authority of a county, within the meaning of the principal Act, shall, so far as they extend to the district of any local authority as defined in this section, be deemed to have been made by such local authority.

(*b*) So much of any register kept by the local authority of any county under the said order as relates to the district of any local authority as defined in this section, or a copy thereof, shall, as soon as may be after passing of this Act, be delivered to the local authority by the local authority of the county.

Unsound Food.

SECTION 43.

43. ANY medical officer or sanitary inspector, or any veterinary surgeon[1] approved for the purposes of this section by the local authority, may at all reasonable times[2] enter any premises[3] within the district of the local authority, or search any cart or vehicle, or any barrow, basket, sack, bag, or parcel, in order to inspect or examine, and may inspect and examine—

(*a*) Any animal, alive or dead, intended for the food of man which is exposed for sale,[4] or is in course of transmission for the purpose of sale or of preparation for sale; and

(*b*) Any article, whether solid or liquid, intended for the food of man, and sold or exposed for sale, or deposited in any place or in course of transmission for the purpose of sale or of preparation for sale;

the proof that the same was not exposed or deposited, or in course of transmission for any such purpose, or was not intended for the food of man, resting with the person charged; and if any such animal or article appears to such medical officer or sanitary inspector or

[1] See Section 3 for definition.

[2] Held that Sunday afternoon might, in certain circumstances, be a reasonable time for examining meat (*Small* v. *Bickley*, 32 L.T. (N.S.), 726; 39 J.P., 422.

[3] Definition of 'premises' given in Section 3.

[4] In any proceedings it must be averred and proved that the animal or article was 'intended for the food of man' as well as 'exposed for sale,' etc. A complaint under Section 26 of the the 1867 Act was held to be irrelevant, as it did not state that fish were exposed for sale, or were, in fact, intended for human food (*Phillips* v. *Auld*, January, 1892, 19 R. (Just.), 29; 29 S.L.R., 299; 1 *County Council Cases*, 30. See also *Braid* v. *John Swan and Sons, Ltd.*, 1903, 5 F., 579; 40 S.L.R., 426; 10 S.L.T., 721). It is not necessary that the complaint should state the cause of the unfitness for human food (*Cairns* v. *Ferguson*, June 8, 1886, 13 R. (Just.), 83—Lord Justice Clerk (Moncrieff)); *Gibson* v. *Town Council of Ayr*, December 23, 1892, 20 R. (Just.), 47—Lord McLaren; 30 S.L.R., 331; 1 *County Council Cases*, 43).

veterinary surgeon to be diseased, or unsound, or unfit for the food of man, he may seize and carry away the same himself or by any assistant, in order to have the same dealt with summarily by a sheriff, magistrate, or justice.

Provided that in the case of any proceeding under this section with regard to a living animal the medical officer or sanitary inspector, unless he is himself a qualified veterinary surgeon, shall be accompanied by a veterinary surgeon approved as aforesaid.

The police force of each police area shall have power to search carts or vehicles, or barrows, baskets, sacks, bags, or parcels, and to assist generally in executing and enforcing this section.

[2] If it appears to a sheriff, magistrate, or justice that any animal or article which has been seized, or is liable to be seized, under this section is diseased, or unsound, or unfit for the food of man, he shall condemn the same,[1] and order it to be destroyed or so disposed of as to prevent it from being exposed for sale or used for the food of man ;[2] and the person to whom the same belongs, or did belong, at the time of sale or exposure for sale, or deposit, or transmission for the purpose of sale, or of preparation for sale, or in whose possession or on whose premises the same was found, shall be liable to a penalty not exceeding fifty pounds for every animal or article, or if the article consists of fruit, vegetables, corn, bread, or flour, for every parcel thereof so condemned, unless he proves

[1] It is competent to apply for a warrant to destroy a carcass without an application for a conviction of the person to whom it belongs ; and an order to destroy, without a conviction for having exposed the carcass for sale, is not appealable to the High Court of Justiciary under the Summary Prosecutions Appeals Act, 1875 (*Couper* v. *Lang*, December 12, 1889, 17 R. (Just.), 15).

[2] In *Cairns* v. *Ferguson*, June 8, 1886, 13 R. (Just.), 13, it was held that an order to destroy was not, under Section 181 of the Police and Improvement Act, 1850, a condition precedent to conviction ; but that decision may not apply to a case under this section, where it is provided that the penalty may be imposed for each animal, etc., ' so condemned.' It does not appear necessary to make the application for a conviction at the same time as the application for warrant to destroy, and in practice this is never done. In *Gibson* v. *Town Council of Ayr*, December 23, 1892, 20 R. (Just.), 47 ; 30 S.L.R., 331 ; 1 *County Council Cases*, 43, it was held competent to present a petition for warrant to destroy a carcass seized by a sanitary inspector, and after obtaining the warrant, to present a second petition against the same person for penalties and expenses of seizure. (See *dictum* by Lord McLaren.) For a case where it was held that the accused had not the carcass ' in his possession as or for human food,' see *Cairns* v. *Linton*, March 4, 1889, 16 R. (Just.), 81. In *Neilson* v. *Parkhill*, December 12, 1892, 20 R. (Just.), 24, where a person was charged under the Glasgow Police Amendment Act, 1890, Sections 19 and 20, with having been found in possession of diseased meat intended for sale for human consumption, the complaint is set forth that the meat was seized in a barrow belonging to accused, driven by his servant, and under his orders. Held that there was a relevant averment of possession by accused.

The full penalty may be exacted for each animal or article in respect of which an offence is committed. (See *Cairns* v. *Ferguson*, June 8, 1886, 13 R. (Just.), 83 ; *dictum* by Lord Young.)

that he and the person acting on his behalf (if any) did not know, and could not with reasonable care have known, that it was in such condition,[1] or where the proceedings are before a sheriff, at the discretion of the court, if it finds that he knowingly and wilfully committed the offence, he shall be liable, without the infliction of a penalty, to imprisonment for a term of not more than three months, with or without hard labour, and also to pay all expenses caused by the seizure, detention, or disposal thereof.

Provided that if such person proves that the animal, or part thereof, condemned as aforesaid was within a reasonable time prior to the seizure thereof examined upon the premises where the animal was slaughtered, and passed by a veterinary surgeon approved as aforesaid, called in for the purpose, and who shall have granted a certificate of passing as nearly as may be as in the next subsection provided, or by a veterinary surgeon in terms of that subsection, he shall be exempt from penalty or imprisonment under this section for such offence.

[3] Each local authority, or two or more local authorities in combination, may, if they think fit, appoint a place or places (—*e.g.*, clearing-house, see p. 123)—within its district or their districts, and fix a time or times at which a veterinary surgeon, approved as aforesaid, shall attend for the purpose of examining any animal alive or dead which may there be submitted to him, and passing or condemning the same, and such veterinary surgeon shall, on receipt of a fee to be fixed by the local authority or authorities, and paid by the owner, examine and pass or condemn in whole or in part any animal or carcass so submitted to him ; and if he shall pass the same, he shall grant a certificate of passing, which shall set forth the name of the owner, the date and hour of examination, and such particulars regarding the animal or carcass as the local authority or authorities may prescribe for the purpose of aiding in the subsequent identification of the same ; and if he shall condemn the animal or carcass, or part thereof, the animal or carcass, or part so condemned, shall be retained and be forthwith destroyed by the local authority or authorities, or so disposed of as to prevent it from being exposed for sale or used for the food of man, and the owner shall be entitled to the net price realized from

[1] In *Ogilvy* v. *Mitchell*, 1903, 5 F. (Just.), 92, in a summary complaint where accused was charged with a contravention of this section, as owner of the carcass of an animal in the course of transmission for the purpose of sale for the food of man which was unsound or unfit for the food of man, two medical men were examined as to the condition of the carcass. They referred in their evidence to reports given by them prior to the trial, upon which an order had been pronounced by the magistrates for the destruction of the carcass. Accused was convicted. Held, on a bill of suspension, that the conviction was not invalidated by failure to produce the order in question at the trial, or to note in the record of proceedings the reports to which the medical witnesses had referred. See *dictum* by Lord McLaren.

the residual product of the carcass or part so condemned, if any, after deducting the expense of condemnation and destruction. Provided that no carcass shall be submitted for examination, either under this or the immediately preceding subsection, unless as a whole carcass, including the thoracic and abdominal viscera, in such manner that the examiner shall be readily able to satisfy himself that the organs are those of the carcass under inspection.

[4] Where it is shown[1] that any animal or article liable to be seized under this section, and found in the possession of any person, was purchased by him, or consigned to him, from another person for the food of man, and when so purchased or consigned was in such a condition as to be liable to be seized and condemned under this section, the person who so sold or consigned the same shall be liable to be brought to trial in the district in which such animal or article was seized, and on conviction shall be liable to the penalty and imprisonment above mentioned, unless he proves that, at the time he sold or consigned the said animal or article, he and the person acting on his behalf, if any, did not know, and could not with reasonable care have known, that it was in such a condition.

[5] A copy of any certificate granted by a veterinary surgeon, under subsections 2 or 3 or this section, shall forthwith be sent by him to the chief constable of the jurisdiction in which the examination of the animal or carcass took place, and the certificate itself shall be sent by the person selling the animal or carcass forthwith after the sale, and not more than seven days from the date of the certificate to the chief constable of the jurisdiction in which the sale of the animal or carcass took place, and if any veterinary surgeon or person shall contravene this enactment, he shall be liable to a penalty not exceeding twenty pounds.

[1] Under this subsection it may be possible to convict in such a case as *Cairns* v. *Linton*, March 4, 1889, 16 R. (Just.), 81, where a farmer in Perthshire sent, in the ordinary course of business, the carcass of a bull addressed to the Dead Meat Company, Edinburgh. The carcass was condemned as unfit for human food, and the farmer was convicted of a contravention of Section 261 of the Edinburgh Police Act, 1879, in respect he had unsound beef in Edinburgh 'in his possession as or for human food.' On appeal, the court (*dub.* Lord Trayner) quashed the conviction, holding that facts had not been proved sufficient to infer that the accused had the carcass in Edinburgh in his possession either actually or constructively as or for human food.

Under a similar section in a local Act, an auctioneer to whom unsound fish were consigned was held not liable to conviction, on the ground that it was not the auctioneer, but the owner of the fish (the auctioneer's employer), who was the seller within the meaning of the section (*Walker* v. *Linton*, 1892, 20 R. (Just.), 1. An Aberdeen consigner of fish sold by an auctioneer in Newhaven Fish Market, and immediately thereafter seized and condemned as unsound, was successfully prosecuted in the Edinburgh Sheriff Court under this section as the person who sold or consigned the fish (*Leith Local Authority* v. *Kennedy*; reported in *Scotsman*, November 25, 1903).

[6] Where any person convicted of an offence under this section has been within twelve months previously convicted of an offence under this section, the sheriff, magistrate, or justice may, if he thinks fit, and finds that the offender knowingly and wilfully committed both such offences, order that a notice of the facts be affixed, in such form and manner and for such period not exceeding twenty-one days, as the sheriff, magistrate, or justice may order, to any premises occupied by that person, and that the person do pay the costs of such affixing ; and if any person obstructs the affixing of such notice, or removes, defaces, or conceals the notice while affixed during the said period, he shall for each offence be liable to a penalty not exceeding five pounds.

[7] If the occupier of a licensed slaughter-house is convicted of an offence under this section, the sheriff, magistrate, or justice convicting him may cancel the licence for such slaughter-house.

[8] If any person obstructs a medical officer, sanitary inspector, or veterinary surgeon as aforesaid in the performance of his duty under this section, he shall, where the proceedings are before a sheriff, and where the sheriff is satisfied that the obstruction was with intent to prevent the discovery of an offence under this section, or that the accused has within twelve months previously been convicted of such obstruction, be liable to imprisonment for any term not exceeding one month in lieu of any penalty authorized by this Act for such obstruction.

[9] A sheriff, magistrate, or justice may act in adjudicating on an offender under this section, whether he has or has not acted in ordering the animal or article to be destroyed or disposed of.

Licensing of Slaughter-houses.

SECTION 33.

A person carrying on the business of a slaughterer of cattle or horses, or knacker, shall not use any premises as a slaughter-house or knacker's yard[1] without a licence[2] from the local authority, and if he does, he shall for each offence be liable to a penalty not

[1] Places for the slaughtering of horses and for the deposit of the carcasses must in burghs be licensed in terms of Section 285 of the Burgh Police Act, 1892 ; but the fact that on several occasions of emergency a horse-slaughterer has permitted the carcass of a horse to lie for a night within unlicensed premises will not justify a conviction under that section (*Simpson* v. *Proctor*, January 8, 1896, 23 R. (Just.), 22 ; 33 S.L.R., 270 ; 3 S.L.T., 369.

[2] The licence is subject to annual renewal, and a fee is chargeable for it (Subsection 2), but the licence will not bar proceedings under Section 16 (6) or Section 36 of this Act, should the business become a nuisance (*Pentland* v. *Henderson*, 1855, 17 D, 542).

exceeding five pounds,[1] and the fact that cattle or horses have been taken into unlicensed premises shall be *prima facie* evidence that an offence under this section has been committed.

[2] A licence under this section shall expire on such day in every year as the local authority fix, and when a licence is first granted, shall expire on the day so fixed which secondly occurs after the grant of the licence, and a fee not exceeding five shillings may be charged for the licence or any renewal thereof.

[3] Not less than twenty-one days before a new licence for any premises is granted under this section notice of the intention to apply for it shall be advertized as provided in subsection 2 of the immediately preceding section by the local authority of the district in which the premises are situate, and any person interested may show cause against the grant or renewal of the licence.

[4] An objection shall not be entertained to the renewal of a licence under this section, unless seven days' previous notice of the objection has been served on the applicant,[2] save that, on an objection being made of which notice has not been given, the local authority may, if they think it is just to do so, direct notice thereof to be served on the applicant, and adjourn the question of the renewal to a future day, and require the attendance of the applicant on that day, and then hear the case, and consider the objection, as if the said notice had been duly given.

[6] The local authority shall have right to enter any slaughter-house or knacker's yard at any hour by day, or at any hour when business is in progress, or is usually carried on therein, for the purpose of examining whether there is any contravention therein of this Act or of any by-law made thereunder.

[7] Where any person carrying on the business of a slaughterer of cattle or horses or knacker at the passing of this Act is refused by the local authority a licence for the premises where such business is carried on, or where any person has been refused a renewal of any licence, such person may appeal to the board against such refusal, and the decision of the board shall be final;[3] but in the case of a

[1] In *Renfrew County Council* v. *Anderson*, 1899, 1 F. (Just.), 48; 36 S.L.R., 321; 6 C.C.C., 36, it was held that a butcher accustomed to kill cattle on farms for payment, who had killed two pigs for A. in the garden behind A.'s house, which was not a licensed slaughter-house, was not in breach of this section, as he had not carried on the business of a slaughterer of cattle in premises of his own within the sense of the Act.

[2] See Section 159.

[3] Where butchers who, prior to the passing of this Act, had used unlicensed premises, and who thereafter, on applying for a licence, were given six months within which to obtain other premises, appealed under this section to the Local Government Board on the eve of the expiry of the six months, it was held that such appeal was no bar to their being prosecuted for using unlicensed premises in breach of Section 279 of the Burgh Police Act (*Paton* v. *Wood*, 1899, 1 F. (Just.), 38; 36 S.L.R., 314; 6 C.C.C., 34).

district other than a burgh the appeal to the board shall only arise after the county council has given its determination on the matter, and a local authority may appeal to the board against the determination of the county council.

Local Authorities may provide a Slaughter-house.

SECTION 34.

The local authority of any district *other* than a burgh may provide, establish, improve, or extend and maintain within or without their district, and two or more such local authorities may combine to so provide, establish, improve, or extend and maintain fit shambles or slaughter-houses for the purpose of slaughtering cattle, and for that purpose may borrow such sums of money as they shall find necessary on the security of the public health assessment, and of the rates to be taken and levied for the use of such shambles or slaughter-houses and ground on which the same are erected, or on any one or more threof, and the provisions of Section 141 (deals with borrowing powers.—W. R.) of this Act shall, with the necessary modifications, apply to such borrowing.

[It will be observed by the student reading the Public Health (Scotland) Act, 1897, that the terms 'slaughterer of cattle' and 'knacker' come under the category of 'Offensive Trades' (Section 32). Under this section it is enacted that no offensive trade can be established without the sanction of the local authority, and the local authority shall give fourteen days' clear notice of their intention to give sanction. Under Section 33 it is necessary to give twenty-one days' notice of the intention to seek a licence for a slaughter-house or knackery. It may be taken for granted that when dealing with licences for the latter the period specified in Section 33 will be that followed.]

BURGH POLICE (SCOTLAND) ACT

Slaughter-houses.

SECTIONS 278-287.

278 (as amended by the Burgh Police (Scotland) Act, 1903).—The Commissioners may provide, establish, improve, or extend, within or without the burgh, fit shambles or slaughter-houses for the purpose of slaughtering cattle, and for that purpose may borrow

such sums of money as they shall find necessary, on the security of the burgh general assessment, and of the rates to be taken and levied for the use of such shambles and slaughter-houses, and of the shambles or slaughter-houses and ground on which the same are erected, or on any one or more thereof, provided that any town council which is refused by a local authority a licence under Section 33 of the Public Health (Scotland) Act, 1897, for premises for a slaughter-house without the burgh may appeal to the Local Government Board for Scotland against such refusal, and the decision of the Board shall be final.

And where in any burgh the Commissioners, or their predecessors in office, shall have provided and established such shambles or slaughter-houses, and shall have paid for that purpose moneys out of the police or other funds under their charge, the Commissioners may repay such moneys out of the burgh general assessment, or out of any moneys borrowed on the security thereof, or in so far as the moneys so paid exceed in amount the moneys borrowed for the purposes of such shambles or slaughter-houses, under the powers of any special Act or provisional order, and may for the purpose of such repayment borrow money on the security of the burgh general assessment; and they may also apply any funds under their charge towards the maintenance and management of such shambles or slaughter-houses, and the payment of any feu duties or any other annual burdens affecting the same, in the event of the rates levied for the use thereof not being sufficient for those purposes.

280 (as amended by the Burgh Police (Scotland) Act, 1903).—The medical officer of health of the burgh shall report to the Commissioners on the sanitary condition of all slaughter-houses belonging to or licensed under the Public Health (Scotland) Act, 1897, by the Commissioners at least twice every year, and he, as well as the sanitary inspector, and any other person who may be specially appointed by the Commissioners for the purpose, shall have right of access to such slaughter-houses at all reasonable times for the purpose of inspecting the same.

281 (as amended by the Burgh Police (Scotland) Act, 1903).—The Commissioners shall from time to time make by-laws, to be confirmed in the manner herein provided, for the registering, regulation, and inspection of slaughter-houses, and preventing cruelty in slaughter-houses, and for keeping the same in a cleanly and proper state, and for removing filth at least once in every twenty-four hours, and for having them properly floored, drained, and provided with a sufficient supply of water, and they may impose pecuniary penalties on persons breaking such by-laws; provided that no such penalty exceed for any one offence the sum of five pounds, and in the case of a continuous violation of such by-laws, the sum of

ten shillings for every day during which such nuisance shall be continued after the conviction of the first offence.

282 (as amended by the Burgh Police (Scotland) Act, 1903).—The magistrate before whom any person is convicted of killing or dressing any cattle contrary to the provisions of this Act, or of the said by-laws, in addition to the penalty imposed, may suspend for any period not exceeding two months the licence granted under the Public Health (Scotland) Act, 1897, to such person ; and such magistrate, upon the conviction of any person for a second or other subsequent like offence, may, in addition to the penalty imposed, declare the licence granted to be revoked.

283. Every person who, during the period for which any such licence is suspended, or after the same is revoked as aforesaid, slaughters cattle in the slaughter-house to which such licence relates, or otherwise uses such slaughter-house, or allows the same to be used as a slaughter-house, shall be liable to a penalty not exceeding five pounds for such offence, and a further penalty of five pounds for every day on which any such offence is committed after the conviction for the first offence.

284 (as amended by the Burgh Police (Scotland) Act, 1903.—If the Commissioners have provided under any former Act, or resolve to provide and establish, and do provide and establish, shambles or slaughter-houses, as herein provided, no person shall thereafter slaughter any cattle or beasts, or scald or dress the carcasses of any slaughtered cattle, or cause the same to be done, within the boundaries of the burgh, elsewhere than within the said slaughter-houses, under a penalty of five pounds for each offence ; provided always that this enactment shall not apply to any owner or occupier within the burgh who may keep any cattle or beasts within the burgh, and who may kill the same for his own or family consumption, and it shall be lawful for the Commissioners to charge, for the use of the said slaughter-houses, such reasonable rate or sum, having regard to the cost of construction, maintenance, and working thereof, as may be agreed on between them and the persons using the same ; and in case of difference as to the rate to be taken for the use of such slaughter-houses, the same shall, upon the application of either party, and after seven days' previous notice to the other party of such intended application, be fixed by the Sheriff in a summary manner, and the decision of the Sheriff shall be final.

And to prevent evasion of the use of such slaughter-houses, all persons who shall, after such slaughter-houses are provided, bring within the boundaries of the burgh, for sale or consumption therein, the carcass, or part of a carcass, of any cattle or beast slaughtered within the distance of two miles beyond such boundaries elsewhere than in slaughter-houses provided or duly licensed in pursuance

of any Act of Parliament shall, on bringing such carcass, or part of a carcass, within the said boundaries, be liable in payment to the Commissioners of the amount of the rates or sums then being levied for cattle or beasts slaughtered in such slaughter-houses provided by them ; provided that where, before the passing of this Act, or within one year thereafter, any burgh shall have erected slaughter-houses, no other slaughter-house shall be erected within the distance of two miles from the existing boundaries of such burgh, unless either it is erected with the consent of the Commissioners of such burgh, or is situated within the area of another burgh, or is provided by a local authority other than a town council, and in such last-mentioned case, notice of the proposal to provide a slaughter-house shall be given by such local authority to the town council of the burgh, and the town council may within one month after receipt of such notice appeal to the Local Government Board for Scotland against such proposal, and the decision of the Board shall be final.

285 (as amended by the Burgh Police (Scotland) Act, 1903).—It shall not be lawful to use any place within the burgh as a place of deposit for the carcasses of horses, unless and until every such place is licensed by the Commissioners, who are hereby authorized to give and recall such licences at pleasure ; and it shall not be lawful to carry or convey within the burgh any dead horse unless in a covered cart or waggon, or unless the dead carcass be sufficiently covered ; and any person who shall offend against this enactment shall be liable to a penalty not exceeding ten pounds, and a further penalty not exceeding two pounds for every day on which such offence shall continue.

286. Nothing in or done under this Act shall interfere with the operation or effect of the Contagious Diseases (Animals) Act, 1878 to 1890, or of any order, licence, or act of the Board of Agriculture made, granted, or done, or to be made, granted or done thereunder, or of any order, regulation, licence, or act of a local authority made, granted, or done, or to be made, granted, or done, under any such order of the Board of Agriculture, or prohibit or interfere with the slaughter of any animals in accordance with the provisions of the said Act, or of any such order, licence, or regulation.

287. The provisions of the Cattle-sheds in Burgh (Scotland) Act, 1866, or Acts amending the same, may be carried into effect and enforced in the burgh by the magistrates, and offences against the same may be tried by the magistrates as police offences, and the penalties may be recovered and applied in the same way as penalties for police offences under this Act.

Pigsties.

SECTIONS 35 and 16 (4), PUBLIC HEALTH (Scotland) ACT, 1897.

35. The local authority may make by-laws regulating the construction of pigsties, the places in which they may be erected, and the mode of cleansing them at proper intervals, so as to prevent them from becoming a nuisance or dangerous to public health. (Observe that under Section 316 of the Burgh Police Act B (7) powers are given to prevent the keeping of swine within a burgh. Section 381 of the same Act enacts that anyone in a burgh who 'keeps any swine near any dwelling-house so as to be a nuisance or an annoyance to the residents or passengers.')

16 (4). Any stable, byre, or other building in which any animal or animals are kept in such manner or in such numbers as to be a nuisance or injurious or dangerous to health.

BY-LAWS WITH RESPECT TO SLAUGHTER-HOUSES

For the licensing, registering, and inspection of slaughter-houses, for preventing cruelty therein, for keeping the same in a cleanly and proper state, for removing filth at least once in every twenty-four hours, and requiring such slaughter-houses to be provided with a sufficient supply of water.

1. Every person who shall apply to the sanitary authority for a licence for the erection of any premises to be used and occupied as a slaughter-house shall furnish in the form hereunto appended a true statement of the particulars therein required to be specified.

2. Every person who shall apply to the sanitary authority for a licence for the use and occupation of any premises as a slaughter-house shall furnish in the form hereunto appended a true statement of the particulars therein required to be specified.

3. Every person to whom the sanitary authority may have resolved that a licence be granted to erect premises for use and occupation as a slaughter-house shall be entitled to receive from the sanitary authority a licence in the form hereunto appended or to the like effect.

4. Every person to whom the sanitary authority may have resolved that a licence be granted for the use and occupation of any premises as a slaughter-house shall be entitled to receive from the

sanitary authority a licence in the form hereunto appended, or to the like effect.

5. Every person who may have obtained from the sanitary authority, in accordance with the provisions of the by-law in that behalf a licence to erect any premises for use and occupation as a slaughter-house, or a licence for the use and occupation of any premises as a slaughter-house, shall register such premises at the office of the sanitary authority.

He shall, for such purpose, apply, by notice in writing addressed to the clerk to the sanitary authority, to register such premises; and thereupon it shall be the duty of the clerk to the sanitary authority, within a reasonable time after the receipt of such notice in writing, to enter in a book to be provided by the sanitary authority in the form hereunto appended the particulars therein required to be specified.

Form of Register of Slaughter-houses.

District of

Folio

Date of registration.	Date of licence.	No. of licence.	Christian name, surname, and address of owner or proprietor of slaughter-house.	Christian name, surname, and address of occupier of slaughter-house.	Situation of slaughter-house.	Number of animals for which accommodation is provided on the premises.			

6. Every occupier of a slaughter-house shall, at all reasonable times, afford free access to every part of the premises to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting such premises.

7. Every occupier of a slaughter-house shall cause every animal brought to such slaughter-house for the purpose of being slaughtered, and confined in any pound, stall, pen, or lair upon the premises previously to being slaughtered, to be provided during such confinement with a sufficient quantity of wholesome water.

8. Every occupier of a slaughter-house and every servant of such occupier, and every other person employed upon the premises in the slaughtering of cattle shall, before proceeding to slaughter any bull, ox, cow, heifer, or steer, cause the head of such animal to be securely fastened, so as to enable such animal to be felled with as little pain or suffering as practicable, and shall in the process of slaughtering any animal use such instruments and appliances, and adopt such method of slaughtering and otherwise take such precautions as may be requisite to secure the infliction of as little pain or suffering as practicable.

9. Every occupier of a slaughter-house shall cause the means of ventilation provided in or in connection with such slaughter-house to be kept at all times in proper order and efficient action ; and so that the ventilation shall be by direct communication with the external air.

10. Every occupier of a slaughter-house shall cause the drainage provided in or in connection with such slaughter-house to be kept at all times in proper order and efficient action.

11. Every occupier of a slaughter-house shall cause every part of the internal surface of the walls and every part of the floor or pavement of such slaughter-house to be kept at all times in good order and repair, so as to prevent the absorption therein of any blood or liquid refuse or filth which may be spilled or splashed thereon, or any offensive or noxious matter which may be deposited thereon or brought in contact therewith.

He shall cause every part of the internal surface above the floor or pavement of such slaughter-house to be thoroughly washed with hot limewash at least four times in every year ; that is to say, at least once during the periods between the first and tenth of March, the first and tenth of June, the first and tenth of September, and the first and tenth of December respectively.

He shall cause every part of the floor or pavement of such slaughter-house, and every part of the internal surface of every wall on which any blood or liquid refuse or filth may have been spilled or splashed, or with which any offensive or noxious matter may have been brought in contact during the process of slaughtering or dressing in such slaughter-house, to be thoroughly washed and cleansed within three hours after the completion of such slaughtering or dressing.

12. An occupier of a slaughter-house shall not at any time keep any dog or cause or suffer any dog to be kept in such slaughter-house.

He shall not at any time keep, or cause or suffer to be kept in such slaughter-house any animal of which the flesh may be used for the food of man, unless such animal be so kept in preparation for the slaughtering thereof upon the premises.

He shall not at any time keep any cattle, or cause or suffer any cattle to be kept in such slaughter-house for a longer period than may be necessary for the purpose of preparing such cattle, whether by fasting or otherwise, for the process of slaughtering.

If, at any time, he keep, or suffer to be kept in such slaughter-house any cattle for the purpose of preparation, whether by fasting or otherwise, for the process of slaughtering, he shall not cause or suffer such cattle to be confined elsewhere than in the pounds, stalls, pens, or lairs provided on the premises.

13. Every occupier of a slaughter-house shall cause the hide or skin, fat, and offal of every animal slaughtered on the premises to be removed therefrom within twenty-four hours after the completion of the slaughtering of such animal.

14. Every occupier of a slaughter-house shall cause the means of water-supply provided in or in connection with such slaughter-house to be kept, at all times, in proper order and efficient action, and shall provide for use on the premises a sufficient supply of water for the purpose of thoroughly washing and cleansing the floor or pavement, every part of the internal surface of every wall of such slaughter-house, and every vessel or receptacle which may be used for the collection and removal from such slaughter-house of any blood, manure, garbage, filth, or other refuse products of the slaughtering of any cattle or the dressing of any carcass on the premises.

15. Every occupier of a slaughter-house shall provide a sufficient number of vessels or receptacles, properly constructed of galvanized iron or other non-absorbent material, and furnished with closely fitting covers, for the purpose of receiving and conveying from such slaughter-house all blood, manure, garbage, filth, or other refuse products of the slaughtering of any cattle or the dressing of any carcass on the premises.

He shall forthwith upon the completion of the slaughtering of any cattle or the dressing of any carcass in such slaughter-house cause such blood, manure, garbage, filth or other refuse products to be collected and deposited in such vessels or receptacles, and shall cause all the contents of such vessels or receptacles to be removed from the premises at least once in every twenty-four hours.

He shall cause every such vessel or receptacle to be thoroughly cleansed immediately after such vessel or receptacle shall have been used for such collection and removal, and shall cause every such vessel or receptacle when not in actual use to be kept thoroughly clean.

16. Every person who shall offend against any of the foregoing by-laws for the registering and inspection of slaughter-houses, for preventing cruelty therein, for keeping the same in a cleanly and proper state, for removing filth at least once in every twenty-four hours, and for requiring such slaughter-houses to be provided with a sufficient supply of water, shall be liable for every such offence to a penalty of five pounds, and in the case of a continuing nuisance to a penalty of ten shillings for every day during which such nuisance shall be continued after the conviction for the first offence :

Provided, nevertheless, that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment as a penalty of any sum less than the full amount of the penalty imposed by this by-law.

MODEL BY-LAWS (LOCAL GOVERNMENT BOARD) REGULATING KEEPING OF ANIMALS

10. The occupier of any premises shall not keep any swine or deposit any swine's dung within the distance of feet from any dwelling-house, or in such a situation or in such a manner as to pollute any water supplied for use or used or likely to be used by man for drinking or domestic purposes or for manufacturing drinks for the use of man, or any water used or likely to be used in any dairy.

11. The occupier of any premises shall not keep any cattle or deposit the dung of any cattle in such a situation or in such a manner as to pollute any water supplied for use, or used, or likely to be used by man for drinking or domestic purposes or for manufacturing drinks for the use of man, or any water used or likely to be used in any dairy.

12. Every occupier of a building or premises wherein or whereon any horse or other beast of draught or burden or any cattle or swine may be kept shall provide, in connection with such building or premises, a suitable receptacle for dung, manure, soil, filth, or other offensive or noxious matter which may, from time to time, be produced in the keeping of any such animal in such building or upon such premises.

He shall cause such receptacle to be constructed so that the bottom or floor thereof shall not in any case be lower than the surface of the ground adjoining such receptacle.

He shall also cause such receptacle to be constructed in such a manner and of such materials and to be maintained at all times in such a condition as to prevent any escape of the contents thereof, or any soakage therefrom into the ground or into the wall of any building.

He shall cause such receptacle to be furnished with a suitable cover, and, when not required to be open, to be kept properly covered.

He shall likewise provide in connection with such building or premises a sufficient drain constructed in such a manner and of such materials and maintained at all times in such a condition as effectually to convey all urine or liquid filth or refuse therefrom into a sewer, cesspool, or other proper receptacle.

He shall, once at least in *every week*, remove or cause to be removed from the receptacle provided in accordance with the requirements of this by-law all dung, manure, soil, filth, or other offensive or noxious matter produced in or upon such building or premises and deposited in such receptacle.

13. Every person who shall offend against any of the foregoing by-laws shall be liable for every such offence to a penalty of , and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority.

Provided, nevertheless, that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment as a penalty of any sum less than the full amount of the penalty imposed by this by-law.

THE DAIRIES, COWSHEDS, AND MILKSHOPS ORDER OF 1885

The Lords and others of Her Majesty's Most Honourable Privy Council, by virtue and in exercise of the powers in them vested under the Contagious Diseases (Animals) Act, 1878, and of every other power enabling them in this behalf, do order, and it is hereby ordered, as follows :

Short Title.

1. This Order may be cited as the Dairies, Cowsheds, and Milkshops Order of 1885, and extends to England, Wales and Scotland only.

Interpretation.

4. In this Order—

The Act of 1878 means the Contagious Diseases (Animals) Act, 1878.

Other terms have the same meaning as in the Act of 1878.

Revocation of Former Orders.

5. The Dairies, Cowsheds, and Milkshops Order of July, 1879, is hereby revoked ; provided that nothing in this Order shall be deemed to revive any Order of Council thereby revoked or to invalidate or make unlawful anything done before the commencement of this Order, or interfere with the institution or prosecution of any proceeding in respect of any offence committed against, or any penalty incurred under, the said Order hereby revoked.

Registration of Dairymen and Others.

6. (1) It shall not be lawful for any person to carry on in the district of any local authority the trade of cowkeeper, dairyman, or purveyor of milk, unless he is registered as such therein, in accordance with this article.

(2) Every local authority shall keep a register of persons from time to time carrying on in their district the trade of cowkeepers, dairymen, or purveyors of milk, and shall from time to time revise and correct the register.

(3) The local authority shall register every such person, but the fact of such registration shall not be deemed to authorize such person to occupy as a dairy or cowshed any particular building or in any way preclude any proceedings being taken against such person for non-compliance with, or infringement of, any of the provisions of this Order or any regulation made thereunder.

(4) The local authority shall from time to time give public notice by advertisement in a newspaper circulating in their district, and, if they think fit, by placards, handbills, or otherwise, of registration being required, and of the mode of registration.

(5) A person who carries on the trade of cowkeeper or dairyman for the purpose only of making and selling butter or cheese, or both, and who does not carry on the trade of purveyor of milk, shall not, for the purposes of registration, be deemed to be a person carrying on the trade of cowkeeper or dairyman, and need not be registered.

(6) A person who sells milk of his own cows in small quantities to his workmen or neighbours, for their accommodation, shall not, for the purposes of registration, be deemed, by reason only of such selling, to be a person carrying on the trade of cowkeeper, dairyman, or purveyor of milk, and need not, by reason thereof, be registered.

Construction and Water-Supply of New Dairies and Cowsheds.

7. (1) It shall not be lawful for any person following the trade of cowkeeper or dairyman to begin to occupy as a dairy or cowshed any building not so occupied at the commencement of this Order, unless and until he first makes provision, to the reasonable satisfaction of the local authority, for the lighting and the ventilation, including air-space, and the cleansing, drainage, and water-supply of the same, while occupied as a dairy or cowshed.

(2) It shall not be lawful for any such person to begin so to occupy any such building without first giving one month's notice, in writing, to the local authority of his intention so to do.

Sanitary State of all Dairies and Cowsheds.

8. It shall not be lawful for any person following the trade of cowkeeper or dairyman to occupy as a dairy or cowshed any building, whether so occupied at the commencement of this Order or not, if and as long as the lighting and the ventilation, including air-space, and the cleansing, drainage, and water-supply thereof, are not such as are necessary or proper—

(*a*) For the health and good condition of the cattle therein; and

(*b*) For the cleanliness of milk vessels used therein for containing milk for sale; and

(*c*) For the protection of the milk therein against infection or contamination.

Contamination of Milk.

9. It shall not be lawful for any person following the trade of cowkeeper or dairyman or purveyor of milk, or, being the occupier of a milk-store or milkshop—

(*a*) To allow any person suffering from a dangerous infectious disorder, or having recently been in contact with a person so suffering, to milk cows or to handle vessels

used for containing milk for sale, or in any way to take part or assist in the conduct of the trade or business of the cowkeeper, or dairyman, or purveyor of milk, or occupier of a milk-store or milkshop, so far as regards the production, distribution, or storage of milk ; or

(*b*) If himself so suffering, or having recently been in contact as aforesaid, to milk cows or handle vessels used for containing milk for sale, or in any way to take part in the conduct of his trade or business, as far as regards the production, distribution, or storage of milk :

until in each case all danger therefrom of the communication of infection to the milk or of its contamination has ceased.

10. It shall not be lawful for any person following the trade of cowkeeper or dairyman or purveyor of milk, or being the occupier of a milk-store or milkshop, after the receipt of notice of not less than one month from the local authority calling attention to the provisions of this article, to permit any water-closet, earth-closet, privy, cesspool, or urinal, to be within, communicate directly with, or ventilate into, any dairy, or any room used as a milk-store or milkshop.

11. It shall not be lawful for any person following the trade of cowkeeper or dairyman, or purveyor of milk, or, being the occupier of a milk-store or milkshop, to use a milk-store or milkshop in his occupation, or permit the same to be used as a sleeping apartment, or for any purpose incompatible with the proper preservation of the cleanliness of the milk-store or milkshop, and of the milk vessels and milk therein, or in any manner likely to cause contamination of the milk therein.

12. It shall not be lawful for any person following the trade of cowkeeper, or dairyman, or purveyor of milk, to keep any swine in any cowshed or other building used by him for keeping cows, or in any milk-store or other place used by him for keeping milk for sale.

Regulations of Local Authority.

13. A local authority may from time to time make regulations for the following purposes, or any of them :

(*a*) For the inspection of cattle in dairies.

(*b*) For prescribing and regulating the lighting, ventilation, cleansing, drainage, and water-supply of dairies and cowsheds in the occupation of persons following the trade of cowkeepers or dairymen.

(*c*) For securing the cleanliness of milk-stores, milkshops, and of milk vessels used for containing milk for sale by such persons.

(*d*) For prescribing precautions to be taken by purveyors of milk and persons selling milk by retail against infection or contamination.

Provisions as to Regulations of Local Authority.

14. The following provisions shall apply to regulations made by a local authority under this Order :

(1) Every regulation shall be published by advertisement in a newspaper circulating in the district of the local authority.

(2) The local authority shall send to the Privy Council* a copy of every regulation made by them not less than one month before the date named in such regulation for the same to come into force.

(3) If at any time the Privy Council are satisfied on inquiry, with respect to any regulation, that the same is of too restrictive a character, or otherwise objectionable, and direct the revocation thereof, the same shall not come into operation, or shall thereupon cease to operate, as the case may be.

Existence of Disease among Cattle.

15. If at any time disease exists among the cattle in a dairy or cowshed, or other building or place, the milk of a diseased cow therein—

(*a*) Shall not be mixed with other milk ; and

(*b*) Shall not be sold or used for human food ; and

(*c*) Shall not be sold or used for food of swine or other animals, unless and until it has been boiled.

Acts of Local Authorities.

16. (1) All orders and regulations made by a local authority under the Dairies, Cowsheds, and Milkshops Order of July, 1879, or any Order revoked thereby, and in force at the making of this Order, shall, as far as the same are not varied by or inconsistent with this Order, remain in force until altered or revoked by the local authority.

(2) Forms of registers and other forms which have been before

* *I.e.*, the Local Government Board for Scotland.

the making of this Order prepared for use by a local authority under the Dairies, Cowsheds, and Milkshops Order of July, 1879, or any Order revoked thereby, may be used, as far as they are suitable, for the purposes of this Order.

Scotland.

17. Nothing in this Order shall be deemed to interfere with the operation of the Cattle-sheds in Burghs (Scotland) Act, 1866.

THE DAIRIES, COWSHEDS, AND MILKSHOPS AMENDING ORDER OF 1887

The following are the enacting provisions of the Dairies, Cowsheds, and Milkshops Amending Order, 1887 :

Whereas it is expedient that the Order of 1885 should be altered as hereinafter mentioned, and that penalties should be imposed for offences against such Order ;

Now, therefore, we, the Board of Supervision for the Relief of the Poor, and for Public Health in Scotland, in pursuance of the powers vested in us by the Act of 1886,* hereby order as follows :

ARTICLE 1.—This Order may be cited as the Dairies, Cowsheds, and Milkshops Amending Order of 1887.

ARTICLE 2.—Article 14 of the Order of 1885 shall be altered by the substitution therein of the words ' Board of Supervision ' for the words ' Privy Council ' occurring therein.

ARTICLE 3.—If any person is guilty of an offence against the Order of 1885, he shall for every such offence be liable to a penalty of five pounds ; provided, nevertheless, that the Sheriff or other magistrate before whom any complaint may be made, or any proceedings may be taken in respect of any such offence, may, if he think fit, adjudge the payment as a penalty of any sum less than the full amount of the penalty imposed by this Order.

ARTICLE 4.—In this Order the expression ' Local Authority ' means the local authority under the Public Health (Scotland) Act, 1867.

* The Contagious Diseases (Animals) Act, 1886.

THE DAIRIES, COWSHEDS, AND MILK-SHOPS ORDER OF 1899

Whereas on the 15th day of June, 1885, Her Majesty's Most Honourable Privy Council (hereinafter referred to as 'the Privy Council'), in pursuance of the statutory provisions in that behalf, made an Order (hereinafter referred to as 'the Order'), which is known as 'The Dairies, Cowsheds, and Milkshops Order of 1885';

And whereas certain powers of the Privy Council, including the power of altering or revoking the Order, were transferred to the Board of Supervision for the Relief of the Poor and for Public Health in Scotland, and thereafter transferred to us, the Local Government Board for Scotland; and in pursuance of such powers, the Order was altered by an Order duly confirmed by the Secretary for Scotland (hereinafter referred to as 'the Amending Order'), which was made by the aforesaid Board of Supervision on the 27th day of January, 1887, and is known as 'the Dairies, Cowsheds, and Milkshops Amending Order of 1887';

And whereas it is expedient that the Order as altered by the Amending Order should be further altered;

Now, therefore, in pursuance of the powers vested in us in that behalf, we hereby order as follows:

ARTICLE 1.—This Order may be cited as 'the Dairies, Cowsheds, and Milkshops Order of 1899.'

ARTICLE 2.—Article 14 of the Order is hereby revoked, and the following provisions shall have effect after the date hereof:

Regulations made by a local authority under the Order shall not take effect unless and until they have been submitted to and confirmed by the Board, who may allow or disallow the same, as they may think proper; nor shall any such regulations be confirmed—

Unless notice of intention to apply for confirmation of the same has been given in one or more of the local newspapers circulated within, or by handbills posted throughout the district to which such regulations relate, one month at least before the making of such application; and

Unless for one month at least before any such application is considered a copy of the proposed regulations has been kept at the office of the local authority, and in the case of districts other than burghs, at the office of the parish council of every parish to which such regulations relate, and has been open during office hours thereat to the inspection of the rate-payers of the district to which such regulations relate, without fee or reward.

Any person aggrieved by any proposed regulation, or by any proposed alteration of a regulation, may within such last-mentioned month forward notice of his objection to the Board.

The clerk of the local authority shall, on the application of any such ratepayer, furnish him with a copy of such proposed regulations, or any part thereof, on payment of sixpence for every hundred words contained in such copy.

A regulation when confirmed by the Board shall not require confirmation, allowance, or approval by any other authority.

ARTICLE 3.—Article 15 of the Order shall be altered so that the expressions in the said article which refer to disease shall include, in the case of a cow, such disease of the udder as shall be certified by a veterinary surgeon to be tubercular; and the Order and the Amending Order shall apply and be construed with the modifications necessary to give effect to this article.

[The attention of dairymen should also be called to the following provisions of the Public Health (Scotland) Act, 1897]:

58. No person suffering from an infectious disease, or who is living in an infected house, shall, without proper precautions against spreading such disease or infection, milk any animal, or pick fruit, or engage in any occupation connected with food, or shall carry on any trade or business in such a manner as to be likely to spread such disease or infection, and any person who knowingly contravenes this section shall be liable to a penalty not exceeding ten pounds. (Amendment of 1907 embodied.)

60. (1) If the medical officer of any district has evidence that any person in the district is suffering from an infectious disease attributable to milk supplied within the district from any dairy situate within the district, or that the milk from any such dairy is likely to cause any such disease to any person residing in the district, such medical officer shall visit such dairy, and the medical officer shall examine the dairy and every person engaged in the service thereof, or resident upon the premises, or who may be resident in any premises where any person employed in such dairy may reside, and, if accompanied by a veterinary surgeon approved as aforesaid, shall examine the animals therein, and the medical officer shall forthwith report the results of his examination, accompanied by the report of the veterinary surgeon, if any, to the local authority or any committee of the local authority appointed under Section 14 to deal with such matters.

(2) If the medical officer of any district has evidence that any person in the district is suffering from any infectious disease attributable to milk from any dairy without the district, or that the milk from any such dairy is likely to cause any such disease to any person residing in the district, such medical officer shall forthwith intimate the same to the local authority of the district in which such

dairy is situate, and such other local authority shall be bound forthwith by its medical officer to examine the dairy and the persons aforesaid, and by a veterinary surgeon approved as aforesaid, to examine the animals therein, previous notice of the time of such examination having been given to the local authority of the first-mentioned district, in order that the medical officer or any veterinary surgeon approved as aforesaid may, if they so desire, be present at the examinations referred to, and the medical officer of the second-mentioned local authority shall forthwith report the results of his examination, accompanied by the report of the veterinary surgeon, if any, to that local authority or any committee of that local authority appointed under Section 14 of this Act to deal with such matters.

(3) The local authority of the district in which the dairy is situated, or any committee appointed for the purpose, shall meet forthwith and consider the reports, together with any other evidence that may be submitted by parties concerned, and shall either make an order requiring the dairyman not to supply any milk from the dairy until the order has been withdrawn by the local authority, or resolve that no such order is necessary.

(4) Where proceedings are taken, or any order is made under this section by the local authority of a district other than a burgh, it shall not be competent to appeal against the said proceedings or against said order to the county council.

(5) The local authority may, if the dairy is within the district, require the dairyman not to supply milk either within or without the district, and shall give notice of the fact to the local authority of any district within which they believe milk to be supplied from such dairy.

(6) Any such order shall be forthwith withdrawn on the local authority, or their medical officer on their behalf, being satisfied that the milk from the dairy is no longer likely to cause infectious disease.

(7) It shall be open to any local authority or dairyman aggrieved by any such resolution or order, or withdrawal of order, to appeal in a summary manner to a Sheriff having jurisdiction in the district in which the dairy is situated, and the Sheriff may either make an order requiring the dairyman to cease from supplying milk, or may vary or rescind any order which has been made by the local authority, and he may at any time withdraw any order made under this section. Pending the disposal of any such appeal the order shall remain in force.

(8) If any person refuses to permit the medical officer or veterinary surgeon of either local authority to make examination as above provided, or, after any order has been made under this section, supplies milk in contravention of the order, he shall be liable to a

penalty not exceeding ten pounds, and, if the offence continues, to a further penalty not exceeding five pounds for every day during which the offence continues.

(9) Provided that—

(*a*) Proceedings in respect of the offence shall be taken before a sheriff having jurisdiction in the place where the dairy is situate ; and

(*b*) A dairyman shall not be liable to an action for breach of contract if the breach be due to an order under this section.

(10) Nothing in, or done under, this section shall interfere with the operation or effect of the Contagious Diseases (Animals) Acts, 1878 to 1886, or of any Order, Licence, or Act of the Privy Council or the Board thereunder, or of any Regulation, Licence, or Act of a local authority, made, granted, or done under any such Order of the Privy Council or the Board, or exempt any dairy, building, or thing, or any person from the provisions of any general Act relating to dairies, milk, or animals.

61. Whenever it shall be certified to the local authority, by the medical officer or other legally qualified medical practitioner, that the outbreak or spread of infectious disease within the district is, in the opinion of such medical officer or medical practitioner, attributable to milk supplied by any dairyman, whether wholesale or retail, or to milk supplied by one or other of several such dairymen, whether wholesale or retail—

(1) The local authority may require such dairyman, whether within or without the district, to furnish to them within a time to be fixed by them, being not less than twenty-four hours, a full and complete list of the names and addresses of all his customers within the district so far as known to him, and such dairyman shall furnish such list accordingly, and the local authority shall pay to him for every such list at the rate of sixpence for every twenty-five names contained therein ; and every person who shall wilfully or knowingly offend against this enactment shall for each such offence be liable to a penalty not exceeding five pounds, and to a daily penalty not exceeding forty shillings.

(2) The local authority may require such dairyman to furnish to them, within a time to be fixed by them, a full and complete list of the names and addresses of the farmers, dairymen, or other parties from whom, during a period to be specified, the milk, or any part of the milk which they sell or distribute, was obtained, and, if required, to produce and exhibit to the medical officer, or to any

person deputed by him, all invoices, pass-books, accounts, or contracts connected with the consignment or purchase of milk during such period, and such dairymen or others shall furnish such lists and produce and exhibit such invoices, pass-books, accounts, or contracts accordingly ; and every person who shall wilfully or knowingly offend against this enactment shall for every such offence be liable to a penalty not exceeding five pounds, and to a daily penalty not exceeding forty shillings.

(3) In any case where the person liable to any penalty under this section is not resident within the district, such penalty may be sued for at the instance of the Procurator-Fiscal before the Sheriff of the county in which such person is either domiciled or carries on business.

The word ' dairy ' includes any farm, farmhouse, cowshed, milkstore, milkshop, or other place from which milk is supplied or in which milk is kept for purposes of sale.

The word ' dairyman ' includes any cowkeeper, purveyor of milk, or occupier of a dairy.

The attention of cowkeepers is drawn to the requirements in regard to cowsheds and byres of the Cattle-sheds in Burghs (Scotland) Act, 1866, as also the rules and regulations made thereunder.

REGULATIONS AS TO DAIRIES, COWSHEDS, BYRES, AND MILKSHOPS

Made under the Public Health (Scotland), Act, 1897, *the Contagious Diseases (Animals) Acts*, 1878 *to* 1886, *the Dairies, Cowsheds, and Milkshops Order*, 1885, *the Dairies, Cowsheds, and Milkshops Amending Order of* 1887, and *the Dairies, Cowsheds, and Milkshops Order of* 1899.

(*a*) For the Inspection of Cattle in Dairies.

1. In every case where the medical officer of health, or the sanitary inspector, or the veterinary surgeon approved for the purposes of Section 43 of the Public Health (Scotland) Act, 1897, or any other officer of the local authority specially authorized by

them for the purpose, has, in pursuance of the statutory provisions in that behalf, obtained access to a dairy with the object of inspecting the cattle therein, the occupier of such dairy, and every person having charge of the cattle therein, shall render all reasonable assistance that may be required by such officer for the purpose of inspection.

(*b*) For Prescribing and Regulating the Lighting, Ventilation, Cleansing, Drainage, and Water-Supply of Dairies and Cowsheds in the Occupation of Persons following the Trade of Cowkeepers or Dairymen.

2. The lighting of dairies and cowsheds shall be by window lights in the roof or walls, the total area of which shall not be less than 3 square feet for every animal which may be stalled therein. The windows or openings shall be so placed as to secure the efficient lighting of every part of the interior of the cowshed.

3. The ventilation of dairies shall be sufficient to maintain therein at all times a sweet and wholesome atmosphere ; and the air which is admitted must not be contaminated from any source, such as by communication with an apartment used for the living and sleeping purposes of mankind, or the neighbourhood of a manure heap or other nuisance ; and the ventilation of cowsheds shall be sufficient for the health and good condition of the cattle therein, and shall be by a through draught from the opposite openings in the walls, and ventilators in the roof. The air-space for each animal therein shall not be less than 500 cubic feet, except that in the case of byres erected subsequent to January, 1890, the air-space for each animal stalled therein shall not be less than 800 cubic feet ; and in no case shall any space of a greater height than 16 feet from the floor be included in the estimation of cubic space.

4. The floor of every dairy or cowshed shall be constructed of stone, concrete, or other impervious material, well laid, and shall have sufficient fall to outlet at doors or elsewhere. The surface drainage shall be by channels of asphalt, or flagstone, set in cement, or a bed of concrete, well laid, with a proper fall towards a gully, which shall be situated outside the shed, and which shall be properly trapped and connected with a public sewer by an adequate drain of spigot and faucet pipes with cement joints.

5. The inner walls of every dairy or cowshed shall be covered with a hard, smooth, impervious material, such as concrete or cement, extending to a height of not less than 6 feet from the floors ; and every such dairy or cowshed shall be provided with

properly shaped troughs, constructed of some hard, impervious material, such as enamelled earthenware. The stalls for single cows shall not be less than 4 feet in width, and a double stall for two cows shall not be less than 7 feet in width ; and, generally, provision must be made to the satisfaction of the said local authority, or their inspector, for the constant admission of an abundant supply of fresh air and the removal of polluted air. The trevasses of the stalls shall be of pavement stone, iron, or other impervious material.

6. The whole premises in and about every dairy or cowshed shall be kept in a proper state of repair and thoroughly clean and in good order ; and every cowshed shall be provided with a proper hydrant for the effective flushing of the same.

7. The floors, troughs, and other parts of every such cowshed as are readily soiled shall be thoroughly cleansed twice every day—viz., before 9 a.m. and after 4 p.m. The cattle therein shall be always provided with sufficient clean bedding. The surface of the yard, court, or curtilage of every dairy or cowshed shall be kept in such a condition and so drained as to be easily cleansed, and every such yard, court, or curtilage shall be kept in a clean and wholesome condition.

8. The inside walls and ceiling of every dairy and cowshed shall be thoroughly cleansed and lime-washed twice in each year—viz., in the months of April and October—and at such other times as the local authority may direct. The lime-wash shall be made from good, freshly-burned lime, mixed with water, and prepared immediately before use.

9. A sufficient dung-pit, or receptacle for dung and other refuse, shall be provided in a proper situation outside the dairy or cowshed, and at an adequate distance from it, and shall be constructed in its bottom and sides of smooth, hard material, impervious to moisture, and properly drained.

10. All manure and refuse from every dairy and cowshed, and the yard, court, or curtilage, shall at each time of cleansing the same be at once deposited in the dung-pit to be provided under the immediately preceding regulation, and the contents of the dung-pit shall be removed therefrom once every week at least, or as often as required by the local authority.

11. The water-supply for all dairies and cowsheds shall be procured from the public water-supply. Due precautions must be taken and diligently observed that such water shall not become in any way polluted or contaminated.

(*c*) For securing the Cleanliness of Milk-stores, Milkshops, and of Milk-vessels used for containing Milk for Sale by such Persons.

12. Every milk-store, milkshop, or place where milk is kept or purveyed, shall be maintained in a state of perfect cleanliness and repair.

13. The walls and ceilings of every milk-store and milkshop shall be thoroughly cleansed as often as may be required by the local authority. Where the walls or ceilings are lime-washed or size-coloured, the lime-wash or size-colour shall be renewed at least every six months ; and where the walls are painted or varnished, such walls shall be washed as often as required by the local authority, and the paint or varnish shall be renewed at least every two years. No paper shall be allowed on the walls unless it is sufficiently varnished, or otherwise so prepared as to permit of its being thoroughly washed.

14. The floors, shelves, counters, and fittings of every milk-store and milkshop shall be washed at least once daily, and no cleansing, sweeping, or dusting shall be carried on without suitably protecting all milk vessels therein from the entrance of dust.

15. No purveyor of milk, or person selling milk by retail, shall allow the milk-vessels to be used for drinking milk or for any purpose whatsoever other than the conveyance, storage, and distribution of milk.

16. Every such vessel, including bungs, bung-cloths, lids, sieves, and filters, shall each time, immediately after being used, be thoroughly washed, and thereafter scalded with boiling water or steam under pressure, and finally dripped, so that no water shall be left therein.

17. No pot, boiler, tank, steam-chest, or other receptacle used for scalding or washing the milk-vessels, cans, etc., shall be used for washing or boiling bed or body clothes, or for any other purpose likely to cause contamination of the milk.

(*d*) For prescribing Precautions to be taken by Purveyors of Milk and Persons selling Milk by Retail against Infection or Contamination.

18. A purveyor of milk, or person selling milk by retail, shall not use as bedding for the cows or other animals in any cowshed, and shall not keep or store therein, any material which has been previously used as bedding for horses or other animals, nor any wool, jute, tow, or flax refuse, sawdust, or other material which is likely to cause contamination of the milk.

19. The cows in every dairy shall be kept clean, and the flanks, udders, and teats of the cows, and the hands of the milkers, shall be properly cleansed before milking is commenced; and the milk shall be at once filtered, by passing it through a sieve, so as to free it from all foreign matter. All milk shall be removed without delay from every cowshed or byre, and no milk vessels shall be retained, stored, or filled within the byre, other than those actually in use for the time being in milking the animals.

20. Every dairyman, purveyor of milk, or person selling milk by retail, shall cause all those employed or engaged in the business to keep their persons and clothing at all times in a thoroughly clean condition, and shall adopt every known and reasonable precaution to provide against and prevent infection or contamination of the milk.

21. No purveyor of milk, or person selling milk by retail, who, while suffering from any contagious disease or affection of the hands or skin likely to lead to contamination of the milk, shall engage, or permit any person in his employment who may be so suffering to engage, in any operation connected with the production, handling, or sale of milk, or expose himself or permit such others in his employment to expose themselves in any place where milk is produced, exposed for sale, stored, or kept.

22. No purveyor of milk, or person selling milk by retail, shall keep milk for sale in any place where it would be liable to become infected or contaminated by gases or effluvia arising from any sewer, drain, cesspool, or closet, or by any effluvia from putrid or offensive substances, or by impure air, or by any offensive or deleterious gases or substances.

23. No purveyor of milk, or person selling milk by retail, shall convey or carry, or permit to be conveyed or carried, through the milk-store or milkshop any excrementitious or offensive matter, or any soiled bed or body clothing.

24. No purveyor of milk, or person selling milk by retail, shall keep or store milk for sale in any apartment used for mangling clothes, or as a dwelling-room or sleeping apartment.

25. A purveyor of milk, or person selling milk by retail, shall not allow any milk-store, milkshop, dairy, or other place where milk is stored or exposed by him for sale to have internal communication by a door, window, room, passage, or otherwise with a dwelling-room or sleeping apartment.

26. No dairy, milkshop, or milk-store, or any place connected and communicating therewith, shall contain any article or have any operation carried on therein, which may tend to contaminate the milk.

27. No purveyor of milk, or person selling milk by retail, shall wash, or scald, or keep any milk-vessel or utensil in any byre, dwelling-room, or sleeping apartment, or in any apartment used for mangling, washing, or boiling bed or body clothing, or in any

boiler, tub, sink, or other receptacle which is used in such process ; and no purveyor or person selling milk by retail shall, in any apartment, or adjoining apartment, where milk is exposed, or where milk-vessels are washed or kept, mangle or wash, or permit any other person to mangle or wash, any bed or body clothing, or hang up such clothing to dry therein.

28. No milkshop or milk-store shall be in communication, directly or through any apartment, or any enclosed passage, with any cowshed, or any place where animals of any kind are kept.

29. No animals of any kind shall be kept within any milkshop or milk-store.

30. No swine or fowls shall be kept within any cowshed.

31. A purveyor of milk, or person selling milk by retail, shall not keep, or permit to be kept, in any dairy or cowshed where cows are stalled whose milk is sold or used for human food, any cow or other animal suffering from any disease which might render such milk liable to infection or contamination.

32. A purveyor of milk, or person selling milk by retail, shall cause every cowshed or stall in any dairy where any cow or other animal suffering from any disease which might render the milk liable to infection or contamination has been stalled to be forthwith, on the removal of the cow or other animal so suffering, thoroughly cleansed and disinfected.

33. The milk from any cow so suffering shall not be mixed with the milk from healthy cows.

34. No infected article shall be taken into or through any part of a dairy, cowshed, milkshop, or milk-store, or premises used in connection therewith.

35. No purveyor of milk, or person selling milk by retail, shall convey, or permit to be conveyed, by any cart or other vehicle used in the conveyance or distribution of milk, either while so engaged or at any other time, any article or thing which is of such a nature as to be likely to contaminate the milk.

THE CATTLE-SHEDS IN BURGHS (SCOTLAND) ACT, 1866

An Act to regulate the inspection of cattle-sheds, cow-houses, and byres within burghs and populous places in Scotland.

1. This Act may be cited as the ' Cattle-sheds in Burghs (Scotland) Act, 1866.'

2. The words ' cattle-sheds,' ' cow-houses,' and ' byres,' shall

mean and include every house, building, shed, yard, or other enclosed place or premises in which bulls, cows, heifers, oxen, or calves are kept or intended to be kept.

3. The magistrates of royal burghs, and also of parliamentary burghs, in Scotland shall have power to require, and shall require, all cattle-sheds and cow-houses and byres within their burghs to be inspected by an officer appointed by them, and if found to be suitable for such purpose, to be licensed by them for the period of one year ; and the magistrates shall likewise have power from time to time to make rules and regulations for the proper sanitary condition of the same, and to fix and determine in each licence the number of cattle which may be kept in such cattle-shed, or cow-house, or byre ; and if any person shall keep any cattle within any burgh without such inspection and licence, or of any of the rules and regulations made by the magistrates, he shall, on conviction before any two of them, be subjected to a penalty not exceeding five pounds for each such offence, and a like penalty for every day after the conviction for such offence upon which such offence is continued.

4. In the case of burghs (other than royal and parliamentary burghs) and populous places in Scotland which have adopted the whole or portions of the Police and Improvement (Scotland) Act, 1862, or, previously to the passing of the said Act of 1862, had adopted the whole or any parts of the Police of Towns (Scotland) Act, 1850, the Commissioners under the said Acts shall have power to require, and shall require, all cattle-sheds and cow-houses and byres within such burghs or populous places to be inspected by an officer appointed by them, and, if found to be suitable for such purpose, to be licensed by them for the period of one year ; and the Commissioners shall likewise have power from time to time to make regulations and rules for the proper sanitary condition of the same, and to fix and determine in each licence the number of cattle which may be kept in each cattle-shed or cow-house, or byre ; and if any person shall keep any cattle within any burgh or populous place without such inspection and licence, or shall violate any of the conditions of such licence, or any part of the rules and regulations made by the Commissioners, he shall, on conviction before the magistrates, be subjected to a penalty not exceeding five pounds for each such offence, and a like penalty for every day after the conviction for such offence upon which such offence is continued.

5. The magistrates before whom any person is convicted of non-observance of any of the regulations made by virtue of this Act may, as often as they shall see cause, give notice in writing requiring the owner or occupier of such cattle-shed, cow-house, or byre to make such sanitary improvements in the same as they shall direct within a period of one month from the date of such written notice ;

and in any case of non-compliance with or disobedience to such notice may, in addition to the penalty imposed on such person under the authority of this Act, suspend, for any period not exceeding one month, the licence granted to such person under this Act ; and such magistrates may, upon the conviction of any person for a second or other subsequent like offence, in addition to the penalty imposed under authority of this Act, declare the licence granted under this Act revoked ; and whenever the licence of any such person is revoked as aforesaid, the magistrates or the Commissioners may refuse to grant any licence whatsoever to the person whose licence has been so revoked.

6. Every licence granted under this Act shall continue in force for the period of one year from the granting thereof, except it shall be suspended or revoked under this Act ; and no fee or reward shall be taken for any such licence ; and such licence shall be required to be renewed once in every year ; and if any person shall use any cattle-shed, cow-house, or byre in any burgh or populous place without a licence, he shall be liable for each offence to a penalty not exceeding five pounds, of which offence the fact that bulls, oxen, or calves have been taken into such place shall be deemed sufficient *prima facie* evidence.

7. After May 15, 1867, fourteen days' clear notice in writing shall be given to the magistrates or the Commissioners of the intention to apply for a licence.

CATTLE-SHEDS, COW-HOUSES, AND BYRES

Rules and Regulations made by the Magistrates of the Burgh of Leith, under and for the purposes of the Cattle-sheds in Burghs (Scotland) Act, 1866, within the Burgh of Leith.

1. No cattle-shed, cow-house, or byre, within the burgh shall be used as such until it has been inspected by an officer appointed by the magistrates, and found suitable for the purpose, and licensed.

2. Before a licence for any cattle-shed, cowhouse, or byre can be granted, fourteen days' notice of the intention to apply for such licence shall be given, in writing, to the magistrates (as required by Section 7 of the Act), through the town clerk.

3. All licences must be applied for in time for the annual court or meeting held by the magistrates, on the first Thursday of May, at twelve o'clock noon ; and any licence granted at that time shall continue for one year, except it be suspended or revoked under the said Act ; but should, in any special circumstances, a licence be

granted at any other period of the year, the same shall continue only, unless so suspended or revoked, until the next annual court, as above mentioned.

4. No licence shall be granted until the magistrates are satisfied that proper provision has been made for the lighting, ventilation, and air-space, and for the cleansing, drainage, and water-supply of the cattle-shed, cow-house, or byre.

5. In every cattle-shed, cow-house, or byre not licensed at the date of these rules, the air-space for each cow or other animal shall not be less than 800 cubic feet ; and where such a cattle-shed, cow-house, or byre shall be licensed to contain more than twelve animals, the cattle-shed, cowhouse, or byre must be so structurally divided, by wall built of stone or brick carried 1 foot above the roof, as that no more than twelve cows shall be in contact with each other.

6. As regards cattle-sheds, cowhouses, or byres licensed at the date of these rules and regulations, the magistrates reserve power to deal with these, as regards air-space, as they deem proper ; but in no such case shall the space for each animal be *less than* 500 *cubic feet.*

7. In all cattle-sheds, cow-houses, or byres, every stall shall have a length of not less than 8 feet ; stalls containing one animal only shall have a width of not less than 4 feet ; and those containing two animals shall have a width of not less than 7 feet ; and the divisions of stalls, if close-boarded, shall not exceed 4 feet 6 inches in height.

8. The inner walls of every cattle-shed, cow-house, or byre, constructed after the date of these regulations, shall be built of, or covered with, an impervious material, such as hard-burned brick, or concrete, or cement, which shall extend to a height of not less than 6 feet above the level of the floor.

9. The floors and channels of all cattle-sheds, cow-houses, or byres must be well formed of suitable and thoroughly non-absorbent material, and these shall be laid with a sufficient slope towards a gulley-hole, properly trapped, outside the byre proper, which shall further be connected by glazed pipes with the public sewer or other sufficient drain.

10. Every cattle-shed, cow-house, or byre shall be kept well and sufficiently lighted, to the satisfaction of the magistrates.

11. Every cattle-shed, cow-house, or byre shall be thoroughly ventilated by louvred ventilators in the roof, or by louvred openings in each of opposite walls, so as to effect a through current of air, or by some other effective method of ventilation approved by the magistrates.

12. Every stall shall be provided with a trough-manger for each animal therein, which manger shall be of glazed earthenware, or

other material approved by the magistrates, and shall be so fixed as to allow of its being readily cleansed.

13. In every case in which a loft exists above the stalls, there shall be a clear space not of less than 2 feet wide left above the heads of the cows, separated from the loft by a wooden or other partition, and communicating with ventilators either in the roof or outer wall. Straw or other like material shall not be placed on open rafters or stages over the stalls.

14. Every cattle-shed, cow-house, or byre shall be provided with a properly constructed box or trough for holding any brewers' grains intended for the animals therein; which box or trough shall be systematically cleaned out, and shall not be within the byre proper.

15. Every cattle-shed, cow-house, or byre shall have suitable places or receptacles into which the dung and litter shall be put; and such places or receptacles shall be constructed of, or lined with, impervious material, and shall be properly drained; but no such places or receptacles shall be within, or communicate directly with, the byre proper.

16. The walls, and every part of cattle-sheds, cow-houses, or byres shall be kept thoroughly clean, and in good order and repair, and in thoroughly wholesome condition; and the walls shall be thoroughly washed with good fresh-burned lime at least twice in each year—namely, in March and October—and on special occasions when deemed necessary by the magistrates.

17. Sufficient bedding shall be provided for the animals, and the animals shall be kept clean and dry.

18. All dung and other offensive matter must be swept up and removed from the byre proper at least twice a day.

19. The receptacle before mentioned, or dungstead, shall be emptied of its contents and removed from the premises at least once a fortnight, or oftener if required by the magistrates.

20. Yards or courts shall be properly paved, channelled, and drained, and kept clean, and no material or lumber, other than what is necessary, shall be stored or allowed to remain therein.

21. Every cattle-shed, cow-house, or byre must be abundantly supplied with pure water for the use of the animals, and otherwise for the conduct of the business, and must be provided with proper appliances for regularly and effectually maintaining cleanliness therein.

22. The magistrates and their inspector, or other person authorized by the magistrates, shall have free access to every part of the business premises at all reasonable hours.

23. No cattle-shed, cowhouse, or byre shall be allowed to have a dairy, milkshop or milk-house within the byre proper or directly communicating therewith.

24. No person occupying a cattle-shed, cow-house, or byre shall allow any person suffering from an infectious disease, or living in a house where such disease exists, to enter the cattle-shed, cow-house, or byre, or in any way to assist in the conduct of the business, during the continuance of such disease, or until all danger of the spread of infection shall have ceased.

25. Previous rules and regulations by the magistrates are hereby rescinded.

BURGH POLICE (SCOTLAND) ACT, 1903

Supply of Milk from Diseased Cows.

83. In the sections of this Act under the heading ' Supply of Milk from Diseased Cows,' the expressions ' dairy,' ' dairyman,' ' district,' ' local authority,' and ' medical officer ' shall respectively have the same meanings as in the Public Health (Scotland) Act, 1897 ; and the expression ' veterinary surgeon ' shall mean a member of the Royal College of Veterinary Surgeons approved by the local authority for the purposes of the said sections.

84.—(1) Every person who knowingly sells, or suffers to be sold, or used for human consumption within the burgh, the milk of any cow which is suffering from tuberculosis of the udder, shall be liable to a penalty not exceeding ten pounds.

(2) Any person the milk of the cows in whose dairy is sold, or suffered to be sold, or used for human consumption within the burgh, who, after becoming aware that any cow in his dairy is suffering from tuberculosis of the udder, keeps, or permits to be kept, such cow in any field, shed, or other premises along with other cows in milk, shall be liable to a penalty not exceeding five pounds.

(3) Every dairyman who supplies milk within the burgh, and has in his dairy any cow affected with, or suspected of, or exhibiting signs of, tuberculosis of the udder, shall forthwith give written notice of the fact to the medical officers of the burgh and of the district in which such dairy is situated, stating his name and address and the situation of the dairy or premises where the cow is.

Any dairyman failing to give such notice shall be liable to a penalty not exceeding forty shillings.

85. It shall be lawful for the medical officer of the burgh or any person provided with, and, if required, exhibiting, the authority in writing of such medical officer, to take within the burgh for examination samples of milk produced or sold, or intended for sale, within the burgh.

86.—(1) If milk from a dairy situate within the burgh is being sold, or suffered to be sold, or used within the burgh, the medical officer of the burgh, or any person provided with, and, if required, exhibiting, the authority in writing of the medical officer of the burgh, may, if accompanied by a veterinary surgeon, at all reasonable hours enter the dairy and examine the cows kept therein; and if the medical officer of the burgh or such person has reason to suspect that any cow in the dairy is suffering from tuberculosis of the udder, he may require the cow to be milked in his presence, and may take samples of the milk, and the milk from any particular teat shall, if he so requires, be kept separate, and separate samples thereof shall be furnished.

(2) If the medical officer of the burgh is of opinion that tuberculosis is caused, or is likely to be caused, to persons residing in the burgh from consumption of the milk supplied from a dairy situate within the burgh, or from any cow kept therein, he shall report thereon to the burgh local authority, and his report shall be accompanied by any report furnished to him by the veterinary surgeon, and the burgh local authority may thereupon serve on the dairyman notice to appear before them within such time, not less than twenty-four hours, as may be specified in the notice, to show cause why an order should not be made requiring him not to supply any milk from such dairy within the burgh until the order has been withdrawn.

(3) If, in their opinion, the dairyman, being a dairyman whose dairy is situated within the burgh, fails to show cause why such an order may not be made as aforesaid, the burgh local authority may make the said order, and shall forthwith serve notice of the facts on the Local Government Board for Scotland.

(4) The said order shall be forthwith withdrawn on the burgh local authority or their medical officer being satisfied that the milk-supply has been changed, or that it is not likely to cause tuberculosis to persons residing in the burgh.

87.—(1) If the medical officer of the burgh has reason to believe that milk from any dairy situate outside the burgh from which milk is being sold, or suffered to be sold or used, within the burgh is likely to cause tuberculosis to persons residing within the burgh, the medical officer of the burgh shall forthwith intimate the same to the medical officer of the local authority of the district in which such dairy is situate, and the medical officer of such local authority, or some person provided with and, if required, exhibiting his authority in writing, accompanied by a veterinary surgeon, shall be bound forthwith to examine the cows therein, and if the medical officer of such local authority, or person authorized by him as aforesaid, has reason to suspect that any cow in the dairy is suffering from tuberculosis of the udder, he may require the cow to be milked

in his presence, and may take samples of the milk, and the milk from any particular teat shall, if he so requires, be kept separate, and separate samples thereof furnished, previous notice of the time of such examination having been given to the burgh local authority in order that the medical officer of the burgh or a veterinary surgeon may, if they so desire, be present at the examination, and the medical officer of the local authority of such district shall forthwith report the results of the examination, accompanied by the report of the veterinary surgeon (if any), to that local authority, or any committee of that local authority, appointed under Section 14 of the Public Health (Scotland) Act, 1897, and shall also furnish a copy of such report to the burgh local authority.

(2) The local authority of such district or any committee of the local authority appointed as aforesaid shall, unless the medical officers of the district and the burgh are both satisfied that there is at the dairy no cow suffering from tuberculosis of the udder, meet forthwith and consider the report or reports, together with any other evidence that may be submitted by the parties concerned, previous notice of not less than twenty-four hours of their meeting and of the purpose thereof having been given to the dairyman and to the burgh local authority, and shall either make an order requiring the dairyman not to supply any milk from such dairy until the order has been withdrawn, or resolve that no such order is necessary, and in the event of their making an order, shall forthwith serve notice of the facts on the Local Government Board for Scotland and on the burgh local authority.

(3) Where proceedings are taken or any order is made or refused to be made under this section by the local authority of a district other than a burgh, it shall not be competent to appeal against the said proceedings or against the said order to the county council.

(4) The local authority may require the dairyman not to supply milk either within or without the district, and shall give notice of the fact to the local authority of any district within which they believe milk to be supplied from such dairy.

(5) Any such order shall be forthwith withdrawn on the local authority or their medical officer on their behalf being satisfied that the milk from the dairy is no longer likely to cause tuberculosis to persons; but notice shall be given to the burgh local authority of any proposal to withdraw the order, and an opportunity given to them of being heard and submitting evidence before the order is withdrawn.

88.—(1) If any person, after an order under either of the two preceding sections has been made, supplies any milk or sells it for consumption, in contravention of the order, he shall be liable to a penalty not exceeding five pounds, and, if the offence continues,

to a further penalty not exceeding forty shillings for every day during which the offence continues.

(2) A dairyman shall not be liable to an action for breach of contract if the breach be due to an order under either of the two preceding sections.

(3) Every dairyman and the persons in his employment shall render such reasonable assistance to the medical officer or such authorized person or veterinary surgeon as aforesaid as may be required by such medical officer, person, or veterinary surgeon for all or any of the purposes of the two preceding sections, and any person refusing such assistance or obstructing such medical officer, person, or veterinary surgeon in carrying out the purposes of such sections shall be liable to a penalty not exceeding five pounds.

(4) It shall be open to the local authority, or any dairyman aggrieved by any resolution or order, or withdrawal of order, under either of the two preceding sections, to appeal in a summary manner to a sheriff having jurisdiction in the district in which the dairy is situate, and the sheriff may either make an order requiring the dairyman to cease from supplying or selling milk, or may vary or rescind, or continue any order which has been made, and he may at any time withdraw any order made under either of the two preceding sections. Pending the disposal of any such appeal, the order shall remain in force.

89. If an order is made without due cause, or if the local authority unreasonably refuse to withdraw the order, the dairyman shall, if not himself in default, be entitled to recover from the local authority making the order full compensation for any damage which he has sustained by reason of the making of the order, or of the refusal of the local authority to withdraw the order, and the sheriff may determine and state whether an order the subject of appeal has been made without due cause, whether the local authority have unreasonably refused to withdraw the order, and whether the dairyman has been in fault.

90. All expenses incurred by the local authority in pursuance of any section of this Act under the heading of ' Supply of Milk from Diseased Cows ' shall be chargeable on the public health general assessment leviable under the Public Health (Scotland) Act, 1897, and the local authority may also charge on the same rate any expenses incurred by them in the application by a veterinary surgeon of the tuberculin or other reasonable test for the purpose of discovering tuberculosis to any cow whose milk is, or was recently, being supplied within the district ; provided that no such test shall be applied except with the previous consent of the owner of such cow.

91. The town council shall cause to be given public notice of the effect of the provisions of this Act relating to supply of milk from

diseased cows by advertisement in a newspaper circulating in the burgh, and by handbills, and otherwise in such manner as they think sufficient, and the said provisions shall come into operation at such time, not being less than one month after the first publication of such advertisement as aforesaid, as the town council may fix.

92. Penalties imposed by any section of this Act under the heading ' Supply of Milk from Diseased Cows ' shall be recoverable in any court having summary jurisdiction where the dairy in question is situated, at the instance of the local authority or of any public prosecutor in such court.

PUBLIC HEALTH (IRELAND) ACT, 1878

Unsound Meat, etc.

SECTIONS 132-136

ANY sanitary officer of the sanitary authority may at all reasonable times inspect and examine any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, milk, or butter exposed or being conveyed for sale, or deposited in any place for the purpose of sale, or of preparation for sale, and intended for the food of man, the proof that the same was not exposed or being conveyed or deposited for any such purpose, or was not intended for the food of man, resting with the party charged ; and if any such animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, milk, or butter appears to such sanitary officer to be diseased, or unsound, or unwholesome, or unfit for the food of man, he may seize and carry away the same himself, or by an assistant, in order to have the same dealt with by a justice ; and should he seize the same in a public thoroughfare, may require the person conveying the same to give his own name and address and that of the owner of the article seized, and in default, or if the officer have reasonable ground for suspecting the names or addresses so given to be false, may detain such person and give him into custody until his real name and address be ascertained. Any person giving a false name or address to any officer authorized to demand the same under this section shall be liable to a penalty not exceeding five pounds.

133. If it appears to the justice that any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, milk, or butter so seized is diseased, or unsound, or unwholesome, or unfit for the food of man, he shall condemn the same, and order it to be destroyed or so disposed of as to prevent it from being exposed for sale or used for the food of man ; and the person to whom the same belongs, or did belong at the time of exposure or conveyance for sale, or in whose possession or on whose premises the same was

found, shall be liable to a penalty not exceeding twenty pounds for every animal, carcass, or fish, or piece of meat, flesh, or fish, or any poultry or game, or for the parcel of fruit, vegetables, corn, bread, or flour, or for the milk or butter so condemned, or at the discretion of the justice, without the infliction of a fine, to imprisonment for a term of not more than three months.

The justice who, under this section, is empowered to convict the offender may be either the justice who may have ordered the article to be disposed of or destroyed, or any other justice having jurisdiction in the place.

134. Any person who in any manner prevents any sanitary officer or other person duly authorized by the sanitary authority of the sanitary district from entering any premises in such district and inspecting any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, milk, or butter, exposed or deposited for the purpose of sale, or of preparation for sale, and intended for the food of man, or who obstructs or impedes any such officer or person, when carrying into execution the provisions of this Act, shall be liable to a penalty not exceeding five pounds.

135. On complaint made on oath by a sanitary officer, or other person duly authorized by a sanitary authority, any justice may grant a warrant to any such officer or person to enter any building, or part of a building, in which such officer or person has reason for believing that there is kept or concealed any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, milk, or butter which is intended for sale for the food of man, and is diseased, unsound, or unwholesome, or unfit for the food of man ; and to search for, seize, and carry away any such animal or other article in order to have the same dealt with by a justice under the provisions of this Act.

Any person who obstructs any such officer or person in the performance of his duty under such warrant shall, in addition to any other punishment to which he may be subject, be liable to a penalty not exceeding twenty pounds.

136. The grand jury of any county may, for the purpose of providing for the due execution of the Sale of Food and Drugs Act, 1875, from time to time, without previous application to presentment sessions, present in advance such moneys as may in their opinion be necessary, and the treasurer, or any person discharging the duties of treasurer, or finance committee of such county may, out of any money in his or their hands raised in pursuance of any such presentment, from time to time advance to any inspector of weights and measures or police constable such sums as he or they may think necessary for the purpose aforesaid.

Markets and Slaughter-houses.

SECTIONS 103-106.

Any urban authority shall have power, at a meeting specially convened for the purpose, of which not less than thirty days' public notice has been given, and at which not less than two-thirds of the members are present, and so that a clear majority of the entire body concurs, and that the Local Government Board approves, to do the following things, or any of them, within their district:

To provide a market-place and construct a market-house and other conveniences for the purpose of holding markets;
To provide houses and places for weighing carts;
To make convenient approaches to such market;
To provide all such matters and things as may be necessary for the convenient use of such market;
To purchase or take on lease or otherwise land or the right to use land, and public or private rights in markets and tolls for any of the foregoing purposes;
To take stallages, rents, and tolls in respect of the use by any person of such market;

but no market shall be established in pursuance of this section so as to interfere with any rights, powers, or privileges enjoyed within the district by any person without his consent.

For the purpose of enabling any urban authority to establish or to regulate markets, there shall be incorporated with this Act the provisions of the Markets and Fairs Clauses Act, 1847, in so far as the same relate to markets—that is to say:

With respect to the holding of the market or fair, and the protection thereof; and
With respect to the weighing goods and carts; and
With respect to the stallages, rents, and tolls;

provided that all tolls leviable by an urban authority in pursuance of this section shall be approved by the Local Government Board.

An urban authority may with respect to any market belonging to them make by-laws for any of the purposes mentioned in Section 42 of the Markets and Fairs Clauses Act, 1847, so far as those purposes relate to markets, and printed copies of any by-law so made shall be conspicuously exhibited in the market.

104. Any urban authority may purchase, and the directors of any market company, in pursuance, in the case of a company registered under the Companies Act, 1862, of a special resolution of the members passed in manner provided by that Act, and in the case of any other company, of a resolution passed by a majority of three-fourths in number and value of the members present, either per-

sonally or by proxy, at a meeting specially convened with notice of the business to be transacted, may sell and transfer to any urban authority, on such terms as may be agreed on between the company and the urban authority, all the rights, powers, and privileges, and all or any of the markets, premises, and things which at the time of such purchase are the property of the company, but subject to all liabilities attached to the same at the time of such purchase.

105. Any urban authority may, if they think fit, provide slaughter-houses, and they shall make by-laws with respect to the management and charges for the use of any slaughter-houses so provided.

For the purpose of enabling any urban authority to regulate slaughter-houses within their district the provisions of the Towns Improvement Clauses Act, 1847, with respect to slaughter-houses shall be incorporated with this Act.

Nothing in this section shall prejudice or affect any rights, powers, or privileges of any persons incorporated by any local Act in force at the time of the passing of this Act for the purpose of making and maintaining slaughter-houses.

Any urban authority may make by-laws for the decent and seemly conveyance of meat through the public thoroughfares.

106. The owner or occupier of any slaughter-house licensed or registered under this Act shall, within one month after the licensing or registration of the premises, affix, and shall keep undefaced and legible on some conspicuous place on the premises, a notice with the words 'Licensed Slaughter-house,' or 'Registered Slaughter-house,' as the case may be.

Any person who makes default in this respect, or who neglects or refuses to affix or renew such notice after requisition in writing from the urban authority, shall be liable to a penalty not exceeding five pounds for every such offence, and of ten shillings for every day during which such offence continues after conviction.

THE LOCAL GOVERNMENT BOARD FOR IRELAND

General Order in pursuance of the Contagious Diseases (Animals) Acts, 1878 *and* 1886.

Now therefore we, the Local Government Board for Ireland, by virtue and in exercise of the powers vested in us under the principal Act and the Contagious Diseases (Animals) Act of 1886, do hereby order as follows :

1. Every regulation made under the said Article 7 of the Order

of 1879, and under our General Order, dated the 7th day of July, 1886, shall be published by advertisement in a newspaper circulating in the district of the local authority.

2. The local authority shall send to us a copy of every such regulation, and of every order of the nature of a regulation made by them pursuant to Article 12 of the Order of 1879, not less than one month before the date named in such regulation or order for the same to come into force.

3. If at any time we are satisfied on inquiry with respect to any such regulation or order of the nature of a regulation, that the same is of too restrictive a character or otherwise objectionable, and direct the revocation thereof, the same shall not come into operation, or shall thereupon cease to operate, as the case may be.

4. Any question arising as to what are orders of the nature of regulations within the meaning of the foregoing Articles, numbered 2 and 3, shall be determined by us, and such determination shall be conclusive.

5. If any person is guilty of an offence against the Order of 1879, he shall for every such offence be liable to a penalty of five pounds, and in the case of a continuing offence to a further penalty of forty shillings for each day after written notice of the offence from the local authority.

Provided, nevertheless, that the justices or court before whom any complaint may be made, or any proceedings may be taken in respect of any such offence, may, if they think fit, adjudge the payment as a penalty of any sum less than the full amount of the penalty imposed by this Order.

6. In this Order the expression ' local authority ' means an urban or rural sanitary authority within the meaning of the Public Health (Ireland) Act, 1878.

7. This Order may be cited as ' The Dairies, Cowsheds, and Milk-shops Amending Order of 1894.'

THE DAIRIES, COWSHEDS, AND MILK-SHOPS (IRELAND) ORDER OF AUGUST, 1879

By the Lord Lieutenant and Privy Council of Ireland.

MARLBOROUGH,

WE, the Lord Lieutenant-General and General Governor of Ireland, by and with the advice and consent of Her Majesty's Privy Council in Ireland, by virtue and in exercise of the powers in us vested under

'The Contagious Diseases (Animals) Act, 1878,' and of every other power enabling us in this behalf, do order, and it is hereby ordered as follows :

Preliminary.

1. This Order may be cited as 'The Dairies, Cowsheds, and Milkshops (Ireland) Order of August, 1879.'
2. This Order extends to Ireland only.
3. In this Order words have the same meaning as in the Contagious Diseases (Animals) Acts, 1878.

Revocation of Former Orders.

4. The Dairies, Cowsheds, and Milkshops (Ireland) Order of 1879, and the Dairies, Cowsheds, and Milkshops Amendment (Ireland) Order of 1879, are hereby from the making of this Order revoked : but nothing herein shall invalidate or make unlawful anything done under those Orders, or either of them, before the making of this Order, or interfere with the institution or prosecution of any proceeding in respect of any offence committed against, or any penalty incurred under, those Orders, or either of them.

Construction and Water-supply of New Dairies and Cowsheds.

5. (1) It shall not be lawful for any person following the trade of cow-keeping or dairyman to begin to occupy as a dairy or cowshed any building not so occupied at the making of this Order, unless and until he first makes provision, to the reasonable satisfaction of the local authority, for the lighting, and the ventilation, including air-space, and the cleansing, drainage, and water-supply of the same, while occupied as a dairy or cowshed.

(2) It shall not be lawful for any such person to begin so to occupy any such building without first giving one month's notice in writing to the local authority of his intention so to do.

Sanitary State of all Dairies and Cowsheds.

6. It shall not be lawful for any person following the trade of cow-keeper or dairyman to occupy as a dairy or cowshed any building, whether so occupied at the making of this Order or not, if and as long as the lighting, and the ventilation, including air-space, and

the cleansing, drainage and water-supply thereof are not such as are necessary or proper—

(*a*) For the health and good condition of the cattle therein ; and

(*b*) For the cleanliness of milk-vessels used therein for containing milk for sale ; and

(*c*) For the protection of the milk therein against infection and contamination.

Cleansing of Dairies, Cowsheds, Milk-stores, Milkshops, and Milk-vessels.

7. A local authority may, from time to time, make regulations for prescribing and regulating the cleansing of dairies and cowsheds in the occupation of persons following the trade of cow-keepers or dairymen, and the cleansing of milk-stores, milkshops, and milk-vessels, used for containing milk for sale by such persons.

Contamination of Milk.

8. If at any time disease exists among the cattle in a dairy or cowshed, or other building or place, the milk of a diseased cow therein—

(*a*) Shall not be mixed with other milk ; and

(*b*) Shall not be sold or used for human food ; and

(*c*) Shall not be sold or used for food of swine, or other animals, unless and until it has been boiled.

9. It shall not be lawful for any person following the trade of cow-keeper or dairyman, or purveyor of milk, or being the occupier of a milk-store or milkshop—

(1) To allow any person suffering from a dangerous infectious disorder, or having recently been in contact with a person so suffering, to milk cows, or to handle vessels used for containing milk for sale, or in any way to take part or assist in the conduct of the trade or business of the cow-keeper or dairyman, purveyor of milk, or occupier of a milk-store, or milkshop, as far as regards the production, distribution, or storage of milk ; or

(2) If himself so suffering, or having recently been in contact as aforesaid, to milk cows or handle vessels used for containing milk for sale, or in any way take part in the conduct of his trade or business, as far as regards the production, distribution, or storage of milk—

until in each case all danger therefrom of the communication of infection to the milk, or of its contamination, has ceased.

10. It shall not be lawful for any person following the trade of cow-keeper or dairyman or purveyor of milk, or being the occupier of a milk-store or milkshop, to use a milk-store or milkshop in his occupation, or permit the same to be used for any purpose incompatible with the proper preservation of the cleanliness of the milk-store or milkshop, and of the milk-vessels and milk therein, or in any manner likely to cause contamination of the milk therein.

Keeping of Swine.

11. It shall not be lawful for any person following the trade of cow-keeper or dairyman or purveyor of milk to keep any swine in any cowshed or other building used by him for keeping cows, or in any milk-store or other place used by him for keeping milk for sale.

Registration of Dairymen and Others.

12. (1) Every local authority shall keep a register of persons from time to time carrying on in the district of the local authority the trade of cow-keepers, dairymen, or purveyors of milk, and shall from time to time revise and correct the register.

(2) The local authority shall from time to time give public notice by advertisement in a newspaper circulating in their district, and, if they think fit, by placards, handbills, or otherwise, of registration being required, and of the mode of registration.

(3) It shall not be lawful for any person to carry on in the district of any local authority the trade of cow-keeper, dairyman, or purveyor of milk unless he is registered as such therein.

(4) A person who carries on the trade of cow-keeper or dairyman for the purpose only of making and selling butter and cheese, or both, and who does not carry on the trade of purveyor of milk, shall not, for the purpose of registration, be deemed to be a person carrying on the trade of cow-keeper or dairyman, and need not be registered.

(5) A person who sells milk of his own cows in small quantities to his workmen or neighbours for their accommodation shall not, for the purposes of registration, be deemed, by reason only of such selling, to be a person carrying on the trade of cow-keeper, dairyman, or purveyor of milk, and need not, by reason thereof, be registered.

Acts of Local Authorities.

13. (1) All orders and regulations made by a local authority under the Dairies, Cowsheds, and Milkshops (Ireland) Order of 1879, and in force at the making of this Order, shall, as far as the same are not varied by or inconsistent with this Order, remain in force until altered or revoked by the local authority.

(2) Forms of registers and other forms which have been before the making of this Order prepared for use by a local authority under the Dairies, Cowsheds, and Milkshops (Ireland) Order of 1879, may be used, as far as they are suitable, for the purposes of this Order.

Given at the Council Chamber, Dublin Castle, the 9th day of August, 1879.

J. T. Ball, *C.*
R. Deasy.
Henry Ormsby.

THE SALE OF FOOD AND DRUGS ACTS, 1875 TO 1907

THE SALE OF FOOD AND DRUGS ACT, 1875

(38 *and* 39 *Vict., c.* 63.)

An Act to [repeal the Adulteration of Food Acts and to] *make better provision for the Sale of Food and Drugs in a pure state.* [11*th August* 1875.]

WHEREAS it is desirable that the Acts now in force relating to the adulteration of food should be repealed, and that the law regarding the sale of food and drugs in a pure and genuine condition should be amended :

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in this present Parliament assembled, and by the authority of the same, as follows :

The words in square brackets in the title, and the whole preamble and enacting words printed in italics down to 'as follows' are repealed by the Statute Law Revision (No. 2) Act, 1893, 56 and 57 Vict., c. 54.

1. Repeal of Statutes.—*From the commencement of this Act the Statutes of the twenty-third and twenty-fourth of Victoria, chapter eighty-four, of the thirty-first and thirty-second of Victoria, chapter one hundred and twenty-one, section twenty-four, of the thirty-third and thirty-fourth of Victoria, chapter twenty-six, section three, and of the thirty-fifth and thirty-sixth of Victoria, chapter seventy-four, shall be repealed, except in regard to any appointment made under them and not then determined, and in regard to any offence committed against them or any prosecution or other Act commenced and not concluded or completed, and any payment of money then due in respect of any provision thereof.*

This section is repealed by the Statute Law Revision Act, 1883 (46 and 47 Vict., c. 39) ; but, notwithstanding the repeal, it is provided by Section 1 of said Act of 1883 that the Acts repealed by this section shall remain unrepealed. The Acts repealed by this section are the following : An Act for Preventing the Adulteration of Articles of Food and Drink, 1860 ; Section 24 of the Sale of Poisons and Pharmacy Act, 1868 ; Section 3 of the Sale of Poisons (Ireland) Act, 1870 ; and the Adulteration of Food and Drugs Act, 1872.

2. Interpretation of Words.—[*The term 'food'*[1] *shall include every article used for food or drink by man, other than drugs or water*:][2]

The term 'drug'[3] shall include medicine for internal or external use:

The term 'county' shall include every county, riding, and division, as well as every county of a city or town not being a borough:

The term 'justices' shall include any police and stipendiary magistrate invested with the powers of a justice of the peace in England, and any divisional justices in Ireland.

[1] In *James* v. *Jones* (1894), 1 Q.B., 304; 58 J.P., 230 (before 1899 Act), baking-powder was held not to be an article of food within this section, but since the 1899 Act it would be. In *Short* v. *Smith* (1895), 11 T.L.R., 325; 59 J.P., 213, chewing-gum, labelled 'Cloves: for chewing only, and not to be eaten,' held not to be 'food' within the meaning of the Act. See also *Bennett* v. *Tyler* (1900), 81 L.T., 787; 64 J.P., 119.

[2] The words in square brackets have been repealed (Act of 1899, s. 27 and Schedule), and Section 26 of the same Act contains an amended definition of 'food' (*post*, p. 327).

[3] The decisions as to the definition of 'drug' have mostly related to articles which are used sometimes as drugs and sometimes as articles of food, and the result of them seems to show that the test is the purpose for which the article is sold. In *Fowle* v. *Fowle* (1896), 75 L.T., 514; 60 J.P., 758, a summons for the sale of adulterated beeswax sold by a grocer, who stated at the time that he could not guarantee it as pure, was dismissed on the ground that beeswax was not a drug, although it was proved that beeswax is used in the preparation of medicines, and is included in the British Pharmacopœia. The opinion of Grantham, J., seems to imply that a conviction would have followed had the article been sold by a chemist. In *Houghton* v. *Taplin* (1897), 13 T.L.R., 386, the magistrates dismissed a summons charging the defendant with selling arsenical soap as a drug, on the ground that, as the soap contained no arsenic, it was not a drug, and no offence had been committed. The court dismissed an appeal against this decision (Hawkins, J.), on the ground that arsenical soap containing no arsenic was not a drug, and Wright, J., on the ground that the soap was a compounded drug within the meaning of subsection (3) of Section 6. See also *Beardsley* v. *Walton and Co.* (1900), 2 Q.B., 1; 82 L.T., 119, as to 'camphorated oil,' a compounded drug; and *Dickins* v. *Randerson* (1901), 1 K.B., 437; 17 T.L.R., 224, dealing with 'mercury ointment,' referred to on pp. 249, 250.

3. Injurious Ingredients of Food.—No person[1] shall mix, colour, stain, or powder, or order or permit[2] any other person to mix, colour, stain, or powder, any article of food with any ingredient or material so as to render the article injurious to health,[3] with intent that the same may be sold in that state, and no person shall sell any such article so mixed, coloured, stained, or powdered,[4] under a penalty in each case not exceeding fifty pounds for the first offence; every offence, after a conviction for a first offence, shall be a misdemeanour, for which the person, on

conviction, shall be imprisoned for a period not exceeding six months with hard labour.

[1] As to whether a limited liability company can be prosecuted under this section see opinions of Channell, J., in the affirmative, and Lord Alverstone, C.J., in the negative, in *Pearks, Gunston, and Tee, Limited*, v. *Ward*; and *Hennen* v. *Southern Counties Dairies Company, Limited*, (1902), 2 K.B., 1; 87 L.T., 51. A label will not protect from prosecution a vendor of an article injurious to health (see Section 8, *post*, p. 251).

[2] A master is liable at common law for knowingly permitting servants to mix unwholesome ingredients with any article of food intended for sale. In *R.* v. *Dixon*, (1814), 3 M. and S., 11; 4 Camp., 12; 15 R.R., 381, a baker was convicted for supplying children at an asylum with bread into which his servants, to his knowledge, had introduced alum.

[3] As to what materials of adulteration are injurious to health, see recommendations in Report of Departmental Committee in 1901.

Where a foreign ingredient has been mixed with an article of food, it must be proved that the latter has thereby been rendered injurious to health by the former before a conviction under this section can take place. It is not enough that the foreign ingredient is in itself injurious to health. The analyst's certificate on which the proceedings are founded does not require to state that the article is injurious to health (*Hull* v. *Horsnell* (1904), 21 T.L.R., 32.)

[4] In *Summers* v. *Grist* (1896), 60 J.P., 346, it was held that it was an offence under this section to sell a 1-pound bottle of peas knowing it to contain 3 grains of sulphate of copper.

In *Goulder* v. *Rook* and *Bent* v. *Ormerod* (1901), 2 K.B., 290; 84 L.T., 719 (Lord Alverstone, C.J., and Lawrance and Phillimore, JJ.), where two beer-sellers had sold beer containing arsenic which had been added without their knowledge or consent, it was held that a person may be convicted of an offence under Section 6, even though the facts would have warranted a prosecution under this section.

4. Mixing Drugs with Injurious Ingredients.—No person shall, except for the purpose of compounding as hereinafter described, mix, colour, stain, or powder, or order or permit any other person to mix, colour, stain, or powder, any drug with any ingredient or material so as to affect injuriously the quality or potency of such drug, with intent that the same may be sold in that state, and no person shall sell any such drug so mixed, coloured, stained, or powdered, under the same penalty in each case respectively as in the preceding section for a first and subsequent offence.

See notes to Section 3. This section applies to drugs only. It will be observed that it is in similar terms to Section 3, which applies to food, with this difference: that, under this section, it is not necessary to show that the mixing, etc., of the drug with the other ingredient is injurious to health.

5. Exemption in the Case of Proof of Absence of Knowledge.—Provided that no person shall be liable to be convicted under either of the two last foregoing sections of this Act in respect of the sale of any article of food, or of any drug, if he

shows to the satisfaction of the justice or court before whom he is charged that he did not know of the article of food or drug sold by him being so mixed, coloured, stained, or powdered as in either of those sections mentioned, and that he could not with reasonable diligence have obtained that knowledge.

To procure a conviction under the Act it is not usually necessary for the prosecution to prove guilty knowledge on the part of the accused (*Betts* v. *Armstead* (1888), 20 Q.B.D., 771; 58 L.T., 811). But to procure an acquittal under the two preceding sections this section imposes upon the accused the onus of proving not only that he had no such knowledge, but that he could not with reasonable diligence have obtained it (see notes to Section 6).

6. Sale of Articles of Food and of Drugs not of the Proper Nature, Substance, and Quality.—No person[1] shall sell to the prejudice of the purchaser[2] any article of food or any drug which is not of the nature, substance, and quality[3] of the article demanded[4] by such purchaser, under a penalty[5] not exceeding twenty pounds; provided that an offence shall not be deemed to be committed under this section in the following cases—that is to say,

(1) Where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce, in a state fit for carriage or consumption, and not fraudulently to increase the bulk, weight, or measure of the food or drug, or conceal the inferior quality thereof;

(2) Where the drug or food is a proprietary medicine, or is the subject of a patent in force, and is supplied in the state required by the specification of the patent;

(3) Where the food or drug is compounded as in this Act mentioned;[6]

(4) Where the food or drug is unavoidably mixed[7] with some extraneous matter in the process of collection or preparation.

To procure a conviction under this section it is not necessary for the prosecutor to prove guilty knowledge on the part of the accused, and it will be no defence for the latter to prove that the act charged was done without his knowledge, and that he could not with reasonable diligence have obtained that knowledge. Any other construction would have defeated the main purpose of the Act, which is the protection of the public against adulteration, and a vendor can always protect himself by refusing to purchase without a warranty under Section 25. A person may be prosecuted under this section even though the facts proved would have supported a conviction under other sections (*Goulder* v. *Rook* and *Beardsley* v. *Walton and Co.*, cited in note to Section 3, *supra*).

[1] 'Person' includes a corporation (*Pearks, Gunston, and Tee, Limited*, v. *Ward; Hennen* v. *Southern Counties Dairies Company, Limited* (1902), 2 K.B.,

1 ; 18 T.L.R., 538. A master is responsible under this section for the unauthorized acts of his servant, or even of a stranger. *Brown* v. *Foot* (1892), 51 L.J.M.C., 110; 66 L.T., 649. In that case a servant admitted he had watered his milk-can previous to selling to an inspector, and that in the face of a warning and special precautions taken by the master against adulteration. Held that the master had been rightly convicted. See also *Parker* v. *Alder* (1899), 1 Q.B., 20 ; 79 L.T., 381, where a similar decision was given. The decision in the carlier case, *Kearley* v. *Tonge* or *Tyler* (1891), 60 L.J. M.C., 150 ; 65 L.T., 261, where the opposite view was taken, is now considered as overruled by *Brown* v. *Foot* and *Parker* v. *Alder*. See *Farley* v. *Higginbotham* (1897), 104 L.T.J., 410; 42 S.J., 309, where a master was held liable for the unauthorized act of his servant ; also note 5 to section 17 (p. 264).

A servant can be convicted under this section as the actual seller (*Hotchin* v. *Hindmarsh* (1891), 2 Q.B., 181 ; 65 L.T., 149).

[2] In a case which came before the High Court of Justiciary in Scotland, shortly after the Act came into operation (*Davidson* v. *McLeod* (1877), 5 R. (J.), 1 ; 3 C. 511), the question was raised whether a sanitary inspector purchasing for analysis under Section 13 of the Act could be prejudiced within the meaning of this section. A majority of a full bench decided the question in the negative. The Court of Queen's Bench took the opposite view in the case of *Hoyle* v. *Hitchman* (1879), 4 Q.B.D., 233. In consequence of this conflict of opinion, and also of opinions expressed by certain of the judges of the Scotch Court in *Davidson* v. *McLeod*, to the effect that the words, 'nature, substance, and quality' in this section meant that, in order to prove adulteration, a prosecutor must prove that an article is defective in all three respects, and not only in one or more of them, the amending provision contained in Section 2 of the Act of 1879 was passed. That section provides that, in prosecutions under this section, it shall be no defence to allege that the purchaser, having bought only for analysis, was not prejudiced by the sale, nor that the article or drug sold, though defective in nature or substance, or in quality, was not defective in all three respects (see p. 295).

In these cases (*Davidson* v. *McLeod* and *Hoyle* v. *Hitchman*) the meaning of the words, 'to the prejudice of the purchaser,' within the meaning of the section, was fully discussed, and as they still remain applicable to private purchases, it is useful to refer to the dicta of the judges. The following is from Mellor's, J., opinion in the case of *Hoyle* v. *Hitchman* : 'If a purchaser, whoever he may be, . . . gets an article inferior to that which he demands and pays for, it seems to me that he is necessarily prejudiced within the meaning of the section.' And Lush, J., said: 'What is the meaning of "prejudice" here? It cannot be confined to pecuniary prejudice or prejudice arising from the consumption of unwholesome food. The prejudice is that which the ordinary customer suffers—viz., that which is suffered by anyone who pays for one thing, and gets another of inferior quality. . . . The words "to the prejudice of the purchaser" are necessary, because, if they had not been inserted, a person might have received a superior article to that which he demanded and paid for, and yet an offence would have been committed.'

In *Smith* v. *Wisden and others* (1901), 18 T.L.R., 92 ; 85 L.T., 760, the article supplied, if different, was better than the article demanded. There was no evidence of inferior quality or adulteration in the ordinary sense of the word (per Lord Alverstone).

The seller of an adulterated article can get outside the provisions of this section in two ways :

(1) He may label the article as mixed in the manner specified in Section 8, as amended by Section 12 of the Act of 1899 ; or

(2) He may give the purchaser notice otherwise, if it is done in such a way as to exclude the possibility of the purchaser being prejudiced. *Sandys* v.

Small (1878), 3 Q.B.D., 449 ; 39 L.T., 118. The manner of giving notice by label is discussed *infra*, p. 251. The following cases illustrate how notice may be given otherwise than by label :

In *Higgins* v. *Hall* (1886), 51 J.P., 293, a purchaser asked for a pound of coffee, and the appellant's wife, serving in the shop, said, ' We don't keep it,' but added, pointing to tins labelled ' Coffee and Chicory,' that she sold that as a mixture. She sold some of the mixture, which contained about 30 per cent. of coffee. Held, on appeal, that a conviction by inferior court was wrong, appellant's wife having sold only a mixture, which she was entitled to do, having represented that it was only a mixture. Further, the purchaser had asked for the mixture and got it.

In *Gage* v. *Elsey* (1883), 10 Q.B.D., 518 ; 48 L.T., 226 ; and *Palmer* v. *Tyler* (1897), 61 J.P., 389, it was held that there had been no sale to the prejudice of the purchasers, printed notices with regard to the strength of the article sold—viz., alcohol—having been hung up in the shops, and the purchasers' attention had been drawn to the notices.

In *Morris* v. *Johnson* (1890), 54 J.P., 612, T. went into J.'s public-house, and, without going into the bar or kitchen, went into a club-room and asked for whisky, and that supplied was 37 degrees under proof. A notice that 'All spirits sold at this establishment are diluted with water, according to price,' was stuck up in the bar and kitchen, but not in the club-room, and nothing was said to T. on delivery. Further, T. did not see the notice. The justices dismissed the complaint. On appeal, the court held that the justices ought to have inquired before deciding whether T. knew that the practice was at J.'s house to sell only diluted spirits, in which case no conviction was proper, and remitted back to the justices to inquire as to such knowledge.

But see *Pearks, Gunston, and Tee, Limited*, v. *Ward* (cited in note to Section 3, *supra*, p. 239), where it was held that a sale may be to the prejudice of the purchaser within this section, although the purchaser has special knowledge, not obtained from the seller, that the article was not of the nature, substance, and quality of the article demanded ; and that the test is whether it would have been to the prejudice of a purchaser not having such special knowledge. In this case the sale was to an inspector who had reason to know that the article supplied was not the article demanded, but as no notice of the adulteration was given to him at the time of sale, it was held that his previous knowledge did not protect the seller. This case shows that the seller, if he wishes to protect himself, must, on every sale, notify the purchaser that the article is mixed, and that it is unsafe for him to remain silent, relying on previous knowledge obtained by the purchaser.

In *Pearks, Gunston, and Tee, Limited*, v. *Houghton* (1902), 1 K.B., 889 ; 86 L.T., 325, it was held that a sale of butter containing 7·8 per cent. of water above the permissible maximum was not to the prejudice of the purchaser in respect of a notice in the shop that the butter was blended, although the inspector did not, in fact, see the notice. The butter was delivered to him in a wrapper on which the notice was also printed. The court held that, assuming only one kind of butter was sold in the shop, the seller was protected by the notice, and the sale was not to the prejudice of the purchaser.

For definition of milk-blended butter, and conditions under which it must now be dealt in, see Act of 1907, Sections 1, 2, 4, and 9 (*post*, pp. 329, 331, 332 and 336).

In *Hayes* v. *Rule and Law* (1902), 87 L.T., 133 ; 18 T.L.R., 535, where the facts were almost identical, but the inspector had asked for 'best fresh butter,' the court, distinguishing this case from *Pearks* v. *Houghton*, held that a notice in the shop, similar to the one in that case, would not be sufficient unless it was proved that the inspector saw the notice. It was held, however, that the defendants were protected by a label (*post*, p. 252).

The notice must, however, be clear and unequivocal. In *Collett* v. *Walker*

(1895), 64 L.J. M.C., 267 ; 59 J.P., 600, a purchaser asked for cheese, and was supplied with a mixture of skimmed milk and beef-fat, from which the bulk of the butter-fat had been abstracted. The bulk of the cheese was labelled ' Valleyfield Finest Oleine Cheese,' the words ' Finest Oleine ' being in smaller type than the others. No other notice was given to the purchaser. The purchaser did not notice the word ' Oleine,' and said if he had he would not have known what it meant. The magistrates convicted, and an appeal against the conviction was dismissed, the court holding that the sale was to the prejudice of the purchaser.

In *Souter* v. *Lean* (1903), 6 F. (J.), 20 ; 41 S.L.R., 192, a food inspector asked for three-halfpenny worth of sweet milk. He was supplied from a can on which the following words were embossed : ' Not guaranteed 3 per cent.'—*i.e.*, not of the standard of sweet milk. The inspector saw the label, and whence the milk was taken. Analysis showed that the milk was a mixture of sweet and skim milk. The sheriff acquitted the accused. An appeal against his decision was sustained, a majority of the court holding that the words embossed on the milk-can were not a sufficient notice that the milk was not pure sweet milk, which was what was asked for, and that, therefore, the sale was to the purchaser's prejudice.

In *Dawes* v. *Wilkinson* (1906), 23 T.L.R., 34, it was held that a person licensed to sell spirits was not immune from prosecution for an offence under this section for diluting rum below 25 degrees under proof by exhibiting a notice that the spirits sold by him were not of any guaranteed strength.

A false representation as to the nature, substance, and quality of the article demanded, made by the seller *prior* to the sale, is not an offence under this section, if the true nature, substance, and quality be disclosed at the time of the sale (*Kirk* v. *Coates* (1885), 16 Q.B.D., 49 ; 54 L.T., 178). In that case a milkman stated to an officer that some cans contained new milk, but, on the officer stating that he would take some, the milkman stated that it was old milk. The court, adhering to the decision of the magistrates, held that this was a sale, not of new, but of old milk, and that there was no offence under this section. But a false representation made at the time of sale constitutes an offence (*Heywood* v. *Whitehead* (1898), 76 L.T., 781). There a milkman sold a pint of milk as new milk for a penny, though, in fact, it was skimmed milk. One of the magistrates thought the inspector should have known from the price that the milk was not new milk, and that no offence had been committed. The court held, however, that there should have been a conviction.

In *Frew* v. *Gunning* (1901), 3 F. (J.), 51 ; 38 S.L.R., 555 ; 3 A., 339, an inspector demanded a sample of sweet milk from a particular can, and was informed by the vendor that the can in question contained milk which he himself had bought, and of the quality of which he was ignorant. The milk, on analysis, was found to contain 13 per cent. of added water. The sheriff acquitted the accused, and the decision was affirmed on appeal, the court holding that the inspector got the article he demanded, after being warned that it might not prove to be sweet milk.

In *Sandys* v. *Jackson* (1905), 69 J.P., 171 ; 92 L.T., 646, an inspector demanded of the defendant a sample from a particular milk-churn. The sample when analyzed was found to be deficient in milk-fat. The magistrate found, as a fact, that there was no request by the inspector to be supplied with milk, but only with a sample from a milk-churn, which he got. Held on these findings of fact that there was no sale to the purchaser's prejudice, and the magistrates' decision was upheld.

An official purchaser may employ a deputy to make the purchase on his behalf (*Horder* v. *Scott* (1880), 5 Q.B.D., 552 ; 42 L.T., 660 ; *Smith* v. *Stace* (1881), 45 J.P., 141 ; *Macaulay* v. *McKirdy* (1893), 20 R. (J.), 58 ; 3 White's Rep. (Sc.), 464).

[3] In *Davidson* v. *McLeod* (cited *supra*, p. 241), it was held that these words, 'nature, substance, and quality,' could not be disjoined. But Section 2 of the Act of 1879 provides that it shall not be 'a good defence to prove that the article of food or drug in question, though defective in nature or in substance or in quality, was not defective in all three respects.'

[4] An offence is committed if an entirely different article is supplied from the article demanded, or if an adulterated article is supplied, or if the article demanded has a recognized commercial standard and an inferior article is supplied. See *Sandys* v. *Rhodes* (1903), 67 J.P., 352 (*post*, p. 252).

In order to be relevant the summons or complaint must clearly specify what was demanded. In *Hamilton* v. *Morrison* (1903), 5 F. (J.), 80, the complaint set forth that the accused sold to the complainer 'to his prejudice' one pennyworth of sweet milk, which was not of the nature, substance, and quality demanded, but did not say what was demanded. The complaint was held to be irrelevant for want of specification.

In the case of *Knight* v. *Bowers* (1885), 14 Q.B.D., 845; 53 L.T., 234, it was decided that an offence had been committed where 'savin' had been sold in answer to a demand by the purchaser for 'saffron.' The court held that Section 6 was not limited to adulterated articles, but covered cases where the article supplied was unadulterated, but altogether different from that demanded.

In *Morton* v. *Green* (1881), 8 R. (J.), 36; 4 Couper, 437, it was held that the sale of an inferior though pure quality of cream at a low price is not an offence within the meaning of this section.

As to condensed milk, in *Lindsay* v. *Hutton* (1894), 1 S.L.T., 454, Sheriff-Substitute Birnie in the Sheriff Court at Glasgow held that the sale of condensed milk was not a breach of the Act, as milk, irrespective of quality, had been asked for by the purchaser.

In *Fyfe* v. *Aitken* (1895), 3 S.L.T., 89, where a prosecution was raised in respect of a sale of ground ginger containing 20 per cent. of spent ginger, the sheriff held that mere inferiority in quality is not sufficient to constitute an offence if the article sold was of the nature, substance, and quality of the article demanded.

In *McLeod* v. *O'Neill* (1882), 9 R. (J.), 32, milk, according to the analyst's report, was diluted with 27 per cent. of water. No evidence was led by the respondent, and the magistrate acquitted. On appeal, the court pronounced no interlocutor, but gave the opinion that the magistrate was not bound to convict unless satisfied that the article sold was not of the nature, substance, and quality demanded. In the official reports the only opinion given is by Lord Young, and it is somewhat difficult to reconcile the decision of the court with the views which he expressed. 'The question put to us,' said his lordship, 'is one of law, and we are of opinion that, if a person so waters milk that in the opinion of the sheriff or other magistrate trying the charge it is not of the nature, substance, and quality of milk demanded by the purchaser, the seller may be lawfully, and if there is nothing to the contrary, ought to be, convicted under the clause of the statute in question. . . . It is the foundation of our opinion that milk may cease to be of the nature, substance, and quality of milk for which it is sold by the simple process of putting water into it. This is an appeal against an acquittal, and we do not think it necessary to do more than announce this as our opinion as matter of law. . . . I may add that if, instead of an acquittal, there had been a conviction here, I should not, and I do not think either of my brethren would, have been disposed to entertain an appeal against it.' The Sale of Milk Regulations of 1901 make it impossible for such a decision to be repeated.

In *R.* v. *Field* (1895), 64 L.J.M.C., 158, a grocer was charged with selling a packet of cocoa containing 80 per cent. of starch and sugar. The justices,

who were all retired naval officers, and had a large experience of cocoa, which was largely used on warships, acting on the knowledge so acquired, held that the starch and sugar had not been added fraudulently, and being of opinion that the offence, if any, was quite trifling, they discharged the accused. On appeal, their so acting was approved. See Report of Select Committee (1894-1896, p. xxxiv), where an opinion was expressed that cocoa prepared as above was adulterated, and that it should be regarded as a mixture and sold with a label.

In *Burton* v. *Mattinson* (1902), 86 L.T., 770 ; 66 J.P., 628, in answer to a request for margarine, a purchaser was supplied with a substance containing 21 per cent. of water, being, as the analyst certified, 5 per cent. more than margarine should contain. The seller contended that the article supplied was margarine. Held that it was a mixture of margarine and water, and that the seller had rightly been convicted of an offence under this section.

In *Roberts* v. *Leeming* (1905), 69 J.P., 417 ; 3 L.G.R., 1031, in answer to a request for margarine, an article was supplied containing only 75·15 per cent. of fat. Margarine usually contains at least 85 per cent. of fat. The justices found that what was supplied was not margarine, and, on appeal, it was held, following *Burton* v. *Mattinson*, that there was evidence on which the magistrates could convict.

See Act of 1907, Section 4 (1), *post*, p. 332, which limits the water in margarine to 16 per cent.

In *Friend* v. *Mapp* (1904), 68 J.P., 589 ; 2 L.G.R., 1317, the respondent was summoned for selling preserved peas to which sulphate had been added to preserve the colour, but not in such a quantity as to be injurious to health, and it was proved that this practice had been in use for years without injury from the use. The justices held that the appellant had obtained what he had demanded, and an appeal against their decision was dismissed.

'Milk.'—The Sale of Milk Regulations, 1901, made by the Board of Agriculture under powers conferred by Section 4 of the Sale of Food and Drugs Act, 1899, provide that where a sample of milk, not being sold as skimmed or separated or condensed milk, contains—

(*a*) Less than 3 per cent. of milk-fat ; or
(*b*) Less than 8·5 per cent. of milk solids other than milk-fat ; and
(*c*) Where a sample of skimmed or separated milk (not being condensed milk) contains less than 9 per cent. of milk solids,

it shall be presumed for the purposes of the Sale of Food and Drugs Act, until the contrary is proved, that the respective milks are not genuine by reason in the case

(*a*) of the abstraction therefrom of milk-fat, or the addition thereto of water ;
(*b*) of the abstraction therefrom of milk solids other than fat or the addition thereto of water ; and
(*c*) of the abstraction therefrom of milk solids other than milk-fat, or the addition thereto of water.

The fixing of a definite standard has made it easier for prosecutors to prove adulteration, but the words 'until the contrary is proved' allow a vendor prosecuted for adulteration to prove his milk to be genuine, no matter how much under the standard it may be, and in numerous cases in certain courts the contrary has been proved with reference to milks under the standard to the extent of 15 per cent., or even more.

In *Smithies* v. *Bridge* (1902), 2 K.B., 13 ; 87 L.T., 167, the milk sold was deficient in fat to the extent of 30 per cent. The milk was sold as it came from the cow, and the deficiency arose through the cow not having been milked for sixteen hours, much of the fat being thus absorbed. The magistrates convicted, and the court by a majority (Lord Alverstone, C.J., and

Channell, J.) upheld the conviction, Darling, J., dissenting. Channell, J., said : '. . . In cases under that section no question of guilty knowledge or fraudulent intent arises, but the only question is whether vendor has sold something not of the nature, substance, and quality of the article demanded. . . . In ordinary cases, if the vendor is able to prove that what he has sold as milk is without alteration and without any manipulation, the identical thing that came from the cow, then, in the absence of any other evidence, I think it must be held that what he sold was milk ; but if the statement of the analyst shows that what was sold had not the proper constituent parts of milk, and if seller were to prove that he had made inquiries and discovered that the cow which had yielded the milk was ill, and that the milk was, therefore, not of its normal strength and richness, and was consequently not of its proper character, then that evidence would confirm the analysis, and show, as I think, that what he sold was not of the nature, substance, and quality of the article demanded. It is true that it would be the direct product of the cow ; but the cow was not in fact producing milk, but was producing another liquid which did not contain the constituent parts of milk. In that case I think that the vendor, although acting in good faith and innocently, ought to be convicted under Section 6 . . . No doubt it is a hard case, and the justice of the case would probably be met by a merely nominal fine, but I think there must be a conviction. . . .

'No doubt, as I have said, this is a hard case, but if we do not lay down the rule in this way, it seems to me that it may work mischief in other cases, where, for instance, the milk, though coming direct from the cow, is clearly infected.'

Lord Alverstone said : 'This case is undoubtedly one of some difficulty, but, on the whole, I have come to the conclusion that we ought to affirm the conviction. . . . It is not necessary, as my brother Channell has pointed out, that the vendor should know of the condition of the article he sells ; if it is not of the nature, substance, and quality of the article demanded, he is liable under Section 6, although he may know nothing about it. . . . The analyst's certificate shows that the milk that was sold did not contain that proportion of fat which milk ought to contain, and usually does contain. I agree that if the only other evidence were that the milk was taken direct from the cow, and if there were no evidence of anything abnormal in the condition of the cow, or in the way in which it had been treated, it would have been wrong for the magistrates to have convicted the appellant ; but it is here found as a fact that, though the milk came direct from the cow, yet that its abnormal condition was due to the way in which the cow had been treated. The magistrates have found that the article supplied was not of the nature, substance, and quality of the article demanded, because it came from the cow in such a condition that it could not be described as milk at all. It is impossible, as I think, to say, having regard to the facts, that there was no evidence on which they could so find. As to the recent Order of the Board of Agriculture, I do not think it purports to set up a standard of what is or is not genuine milk, but only means to say that the want of a certain percentage of fat is to be *prima facie* evidence that the milk is not genuine, and it will still be open to the defendant to prove that the milk is genuine. If, however, the article produced, although it is produced by the cow, is the result of an abnormal condition of things arising either from disease, or, as here, from unusual treatment of the cow, I think that that does amount to evidence on which the magistrates can find that the article is not of the nature, substance, and quality of the article demanded.'

In *Wolfenden* v. *McCulloch* (1905), 92 L.T., 857 ; 21 T.L.R., 411, the defendant was charged with selling milk containing only 2·81 per cent. of milk-fat. It was proved that the deficiency was due to the fact that the cows had not been milked for fourteen hours, and that there had been no abstraction of fat or adulteration of the milk. It was held that the justices were not bound to convict on the authority of *Smithies* v. *Bridge*, but that they

should have considered whether the article supplied was of the nature, substance, and quality of the article demanded; and that, the absence of milk-fat not being so large as to point to an abnormal state of things, there was no evidence upon which they could convict. Conviction therefore quashed.

In *Banks* v. *Wooler* (1900), 81 L.T., 785; 64 J.P., 245, the defendant was prosecuted for a contravention of this section by selling milk which contained 3·55 per cent. of fat, but only 7·46 per cent. of non-fatty solids. The analyst certified that, in his opinion, 'this milk contains 10 per cent. of added water.' The justices held the charge proved, but as it appeared the milk was exceptionally good, they thought the offence trifling and dismissed the summons. On appeal, it was held (*Channell and Bucknill*, JJ.) that if the milk was exceptionally good after adulteration, the justices might have considered the offence too trifling to convict; but that if the milk had only been exceptionally good before adulteration, the offence was not trifling, and they should have convicted.

In *Warnock* v. *Johnstone* (1881), 8 R. (J.), 55, it was held that a person who sold butter-milk containing 30 per cent. of added water was not guilty of an offence under this section. It was proved that the addition of some water was necessary in the process of manufacture of the butter, and the case accordingly fell under the exception in subsection 4 of this section.

'Butter.'—For standard for pure butter, see Sale of Butter Regulations, 1902 (*post*, p. 349), and for butter, margarine, and milk-blended butter, see Act of 1907, Section 5.

See *Pearks, Gunston, and Tee, Limited*, v. *Knight*, and *Pearks, Gunston and Tee, Limited*, v. *Van Tromp* (1901), 2 K.B., 825; 85 L.T., 379, where it was held that butter mixed with milk, containing, by reason of the mixture, 22·5 per cent. of water, was not genuine butter.

'Spirits.'—See Section 6 of the Act of 1879 for standard.

In *Wilson and McPhee* v. *Wilson* (1903), 6 F. (J.), 10, an inspector entered a booth at an agricultural show where the appellants were carrying on business as refreshment contractors, and asked one of the appellants what kind of brandy he was selling. He received the reply, 'Tricoche's brandy.' The inspector did not catch the words, and left the premises. He returned about ten minutes later and asked a shopman for a bottle of brandy. The shopman thereupon supplied him with a bottle of liquor labelled 'Old Brandy: Tricoche and Co., Cognac XXX,' and asked and was paid eight shillings for it. The inspector then stated that he had bought the brandy for analysis, and divided it into three parts, as required by the statute. In a prosecution for contravention of Section 6, the complaint set forth that the liquid sold as brandy was not genuine brandy, in respect that at least 65 per cent. of the spirit in it was not derived from grapes, and that the liquid contained only 12·32 parts of ether and 33 parts of furfural per 100,000, whereas genuine brandy contained at least 85 parts of furfural per 100,000 parts of brandy. The analyst's certificate showed that the liquor had been adulterated to the extent alleged. The sheriff convicted, holding it proved, *inter alia*, that '(5) brandy, when genuine, is a distillation of wine or grape spirit, and possesses medical qualities of the highest value in cases of fainting or collapse. These qualities, which are not found to the same degree in any other spirituous liquor, are due to the comparatively large proportion of ethers which brandy distilled from wine or grape spirit contains; (6) analysis of different brands of high-class brandies bought in the ordinary way in shops in this country—*e.g.*, Hennessy's and Martell's—yielded a fairly uniform result as regards proportion of ethers, and enabled a safe standard to be formed for judging as to the genuineness of the liquor in question; (7) the liquor in question contained a large proportion—about one-half—of either raw grain or beet-root spirit, and was therefore not of the nature, substance, and quality of brandy; (8) certain standard dictionaries, in defining brandy, do not confine it to distillation from wine or

grape spirit, and spirituous liquor is often offered for sale as brandy, although it is not a grape spirit, but distilled from grain—as rye, maize, or barley—or from potatoes, and even abroad from figs or wine refuse, in all which cases it has to be coloured and flavoured so as to resemble and pass for genuine brandy. (9) The appellants bought the brandy in cask in this country from the importers, who had imported it from France in cask. The appellants bottled it for themselves.'

An appeal against the conviction was refused by the High Court of Justiciary (the Lord Justice-Clerk dissenting), the majority of the court (Lords Trayner and Moncrieff) holding that in the case of an article like brandy, when no standard of purity has been fixed by regulation, the question whether the article supplied is of the nature, quality, and substance of the article demanded is one of fact to be decided by the sheriff on the evidence before him. The ground of the Lord Justice-Clerk's dissent was that in the circumstances due notice had been given to the purchaser of what he was being supplied with, and, therefore, he suffered no prejudice.

'MARMALADE.'—There is no recognized standard for this article. In *Smith* v. *Wisden* (1901), 85 L.T., 760 ; 66 J.P., 150, marmalade was sold which contained 13 per cent. of glucose instead of cane or beet sugar. Evidence was given that for many years glucose had been used in the manufacture of marmalade, and that its use tended to prevent mildew. The justices convicted. On appeal, the conviction was quashed, the court holding that there was no evidence to show that this substance was not marmalade. Lord Alverstone said : ' It has been judicially decided that the difference between the article demanded and that supplied must be to the prejudice of the purchaser. . . . In the present case an article was given to the purchaser which, if different, was rather better. There was no evidence of any inferior quality, or of adulteration, in the ordinary sense of the word.'

This decision was followed in *Wilson* v. *McCutcheon* (1902), 5 F. (J), 5 ; 4 A., 34 ; 40 S.L.R., 31, where the respondent was charged with a contravention of this section by selling marmalade adulterated with 14 per cent. of starch glucose, which, as the complaint stated, was foreign to marmalade. In affirming the judgment of the Sheriff-Substitute, Lord Low said : ' Marmalade is not a simple substance, nor is it an article for which a known and recognized standard exists, such as drugs, the standards of which are found in the British Pharmacopœia. It is a compounded article for which, so far as appears, there is no fixed standard. On the other hand, the adulteration is said to have consisted in the introduction of a certain amount of starch glucose, an entirely innoxious substance of the nature of sugar. . . . It seems to me that in all cases of prosecutions under Section 6 of the Sale of Food and Drugs Act, 1875, where the article said to have been adulterated is a compounded article for which there is no fixed standard, and where the adulteration is said to have consisted in the introduction of a substance *prima facie* innocuous, it is incumbent upon the prosecutor to insert in the complaint such specification of the nature of the article said to have been adulterated, and of the effect of the introduction of the alleged extraneous substance, as will make it clear that, if what is alleged is true, the accused did sell to a purchaser an article which was not of the nature, substance, and quality of the article demanded by him. In that respect I am of opinion that the complaint now under consideration entirely fails. Assuming the statements in the complaint to be true, it seems to me impossible to say that the article supplied to the purchaser was not the article demanded by him. I think it right, however, to add that I desire to express no opinion whatever upon the merits of the case. For anything I know to the contrary, it may be that marmalade in which there is 14 per cent. of starch glucose is not of the nature, substance, and quality of marmalade. All that I say is that the complaint does not relevantly set forth that that is the case.'

Drugs.—In almost all the cases with reference to drugs which have been appealed to the courts of review, the question has been raised whether the British Pharmacopœia was a standard for drugs. Although it is not a standard by statutory enactment, the result of the decision seems to be that it is the only recognized standard for the drugs named in it, so that if a drug of the B.P. be demanded of a chemist by its name in the B.P., he is bound to supply it compounded as prescribed in the B.P. The seller can, of course, get outside the statute by notice to the purchaser by label or otherwise that the drug supplied is not compounded according to the B.P.—*i.e.*, that it is different from the article demanded. Many chemists and pharmacists strongly contend that the B.P. should be made an absolute standard for drugs, but it is conceded that before this can be done a revised pharmacopœia is necessary. The leading cases under this head are *White* v. *Bywater* (1887), 19 Q.B.D., 582 ; 51 J.P., 821. In that case a chemist sold tincture of opium containing less alcohol and opium than the quantities prescribed in the B.P. The magistrates acquitted. On appeal, it was held that he ought to have been convicted, although he had not asked for tincture of opium prepared according to the B.P.

In *Dickins* v. *Randerson* (1901), 1 K.B., 437 ; 84 L.T., 204, a chemist sold mercury ointment containing 12·5 per cent. of mercury. According to the B.P., it should have contained 48·5 per cent. The chemist attempted to prove that there was a commercial standard among druggists for the ointment supplied, and that the practice was to supply the weaker ointment unless the stronger was specially asked for. The justice convicted, and the conviction was upheld on appeal.

In *Boots Cash Chemists* (*Southern*), *Limited*, v. *Cowling* (1903), 67 J.P., 195 ; 19 T.L.R., 370, a chemist sold liniment of soap in which methylated alcohol had been substituted for rectified alcohol, as prescribed by the B.P. Evidence was tendered to show that there was a commercial standard for liniment of soap different from that prescribed by the B.P. The magistrates rejected this evidence, and convicted. On appeal, it was held that the evidence ought to have been received, but the court sent the case back for rehearing. No opinion was expressed as to what the value might be of the rejected evidence.

In *Robertson* v. *Duncan, Flockhart and Powell* (1906), decided in the Edinburgh Sheriff Court by Sheriff-Substitute Orphoot, and reported in vol. lxxvi. of the *Pharmaceutical Journal* at pp. 558, 671, and 713, the respondents were charged with a contravention of this section by supplying, in answer to a demand for liquid extract of cascara sagrada, a drug compounded in all its essentials, as they contended, according to the formula of the B.P., but with the substitution of glycerine for alcohol, the latter being, they said, merely a preservative, and, as they argued, a non-essential. The Sheriff-Substitute held that, on the evidence, the purchaser, a sanitary inspector, had been informed that the article sold was not the pharmacopœial preparation, but a preparation known as ' Duncan's,' and, therefore, found the charge not proven ; but he expressed the opinion that the substitution of glycerine for alcohol as a preservative did not make the article different or weaker in substance and quality from the article originally demanded, and which the respondents were bound to supply—viz., liquid extract of cascara compounded according to the B.P. formula.

[5] The maximum penalty is seldom imposed. In many cases the penalties imposed are modified to an absurd extent, with the result that they are no deterrent. See Section 17 of the Act of 1899 (p. 320) for penalties for second and subsequent offences. The summons or complaint should state whether the offence is a first, second, or subsequent offence, and should crave the appropriate penalty. In England costs in addition to a fine can be inflicted upon a defendant, but not in Scotland, *MacKirdy* v. *McKendrick* (1897), 25 R. (J.), 49 ; 2 Adam, 435. In that case Lord Kincairney expressed the opinion

that Section 18 of the Summary Procedure Act, 1864, authorized execution by imprisonment, since imprisonment was not expressly excluded by the terms of this Act.

[6] The words 'compounded as in this Act mentioned' have, by inadvertence, been left in the Act (see Justice Channell's remarks in *Beardsley* v. *Walton and Co., Limited* (1900), 2 Q.B., 1 ; 82 L.T., 119).

[7] The words 'unavoidably mixed' are for the protection of dealers in articles in which it is impossible to prevent the presence in them of foreign ingredients, such as sand in pepper, mineral matter in tea (*Shortt* v. *Robinson* (1899), 68 L.J.Q.B., 352 ; 80 L.J., 261), water in buttermilk (*Warnock* v. *Johnstone* (1881), 8 R. (J.), 55 ; 4 Coup., 509). In this case the defendant was found entitled to escape a conviction under the subsection. Buttermilk was sold mixed with 30 per cent. of water, and it was proved that the addition of some water was necessary in the process of manufacture. In *Bosomworth* v. *Bridge* (1902), 36 Sol.J., 594, a person was convicted of selling buttermilk containing 21½ per cent. of water. The defence was that the water had been unavoidably mixed in the preparation of the butter, and also to make it fit for carriage. A stated case for the opinion of the High Court did not state whether or not this defence had been proved, and the case was sent back to state the facts definitely.

Section 24 provides that where the fact of an article having been sold in a mixed state is proved, if the defendant desires to rely upon any exception or provision in the Act, it shall be incumbent upon him to prove the same.

In *Sandys* v. *Markham* (1887), 41 J.P., 52, mustard had been purchased by an inspector for analysis, and was found to contain 35 per cent. of flour, and the justices found, as a fact, that this percentage of flour was required for the preparation of mustard as an article of commerce in a state fit for consumption. As the case disclosed no evidence to support this finding, it was remitted to be restated, but it does not seem to have again come before the court. In dealing with this article, the Select Committee on Food Products Adulteration, in their Report (p. xxxvii), say : 'There is reason to believe that the admixture of wheat flour and a colouring agent with the pure mustard, in order to prepare common commercial mustard, is a practice followed, not only with a view to meeting the taste of the public, who are said to show a marked preference for mixed mustard, but also to prevent fermentation and decomposition. . . .

'Whether condiment mustard prepared as above indicated is to be regarded as a mixture within the meaning of the Acts, or whether it may be regarded as an article falling within the provisions of subsection 1 of Section 6 of the Act of 1875, is a question upon which your Committee express no opinion. It is obvious that an answer to this question is required in order to determine whether condiment mustard may be sold under the simple designation of mustard, or whether it should be labelled and sold as a mixture.' This question does not seem to have been considered by any of the Supreme Courts.

7. Provision for the Sale of Compounded Articles of Food and Compounded Drugs.—No person shall sell any compounded article of food or compounded drug which is not composed of ingredients in accordance with the demand of the purchaser, under a penalty not exceeding twenty pounds.

In *Beardsley* v. *Walton and Co.* (1900), 2 Q.B., 1 ; 82 L.T., 119, Channell (J.) said, regarding this section, that its purpose was 'to make it clear that in a compounded article or compounded drug the ingredients must be according to the requirements'; and offences under this section can also be prosecuted under Section 6 (see *Dickins* v. *Randerson* (1901), 1 K.B., 1 ; 84 L.T., 204).

8. Protection from Offences by giving Label.[1]—Provided that no person shall be guilty of any such offence as aforesaid in respect of the sale of an article of food or a drug mixed with any matter or ingredient not injurious to health, and not intended fraudulently[2] to increase its bulk, weight, or measure, or conceal its inferior quality, if at the time of delivering such article or drug he shall supply to the person receiving the same a notice, by a label distinctly and legibly written or printed[3] on or with the article or drug, to the effect that the same is mixed.[4]

[1] It has been explained in notes to Section 6 that a seller may get outside that section by notifying the purchaser that the article sold is mixed, and that he may do so either by label under this section or by notice displayed in his premises, or even verbally, provided the notice be unequivocal, and brought to the knowledge of the purchaser. The most unequivocal notice is by label under this section. The label must be on the article or drug when it is delivered to the purchaser; it must be 'distinctly and legibly written or printed,' and Section 12 of the Act of 1899 provides that the label shall not be deemed to be distinctly and legibly written or printed within the meaning of this section 'unless it is so written or printed that the notice of mixture given by the label is not obscured by other matter on the label.' It is only necessary to state that the aricle is mixed. It is not necessary to specify the ingredients nor the proportions (*Otter* v. *Edgely* (1893), 57 J.P., 457).

[2] But notice by label or otherwise will only protect a seller when an article of food or drug has been mixed with any matter or ingredient not injurious to health, and not intended fraudulently to increase its bulk, weight, or measure, or to conceal its inferior quality.

In *Liddiard* v. *Reece* (1880), 44 J.P., 233, the defendant sold coffee mixed, as the analyst's certificate showed, with chicory, the respective proportions being 40 and 60 per cent. To the package a label was attached stating, 'This is sold as a mixture of chicory and coffee.' The defendant pleaded the label. The magistrates convicted, holding that the mixture of chicory appeared to be intended fraudulently to increase the bulk, weight, or measure of the article, the price charged being that usually charged for pure coffee. The conviction was upheld by the High Court, on the ground that, the magistrates having found that the mixing was fraudulent with intent to increase the bulk, the label did not protect the seller.

In *Horder* v. *Meddings* (1880), 44 J.P., 234, coffee was asked for, and a mixture consisting of 85 per cent. of chicory and 15 per cent. of coffee was supplied. A label was attached stating that the article was mixed. The defendant pleaded the label, and that he had supplied the article as he received it from the manufacturer. The magistrate convicted, holding that the chicory had been added fraudulently to increase the bulk. This decision was upheld on appeal, Lush, J., stating that the magistrate was bound to find whether the chicory had been added fraudulently to increase the bulk, and if so, there ought to be a conviction, notwithstanding the label, and that it was no defence to say that the article had been sold as received from the manufacturers.

In such cases, however, there must be evidence of fraud before a conviction can follow. In *Otter* v. *Edgely* (1893), 57 J.P., 457, French coffee was asked for, and a mixture consisting of 60 per cent. of chicory and 40 per cent. of coffee was supplied in a tin with a label stating that the article was a mixture. The magistrate convicted on the ground that the chicory had been added fraudulently to increase the bulk. An appeal against the conviction was

sustained, the High Court holding that there was no evidence of fraud, and that the label protected the seller.

In *Jones* v. *Jones* (1894), 58 J.P., 653, a similar decision was given. In that case the article sold was cocoa, but consisted of 30 per cent. of cocoa and 70 per cent. of starch and sugar. It was labelled as being a mixture, and this, in the absence of evidence of fraud, was held to protect the seller.

From these cases it appears that the fact of the article supplied being adulterated with a different substance to an extent exceeding 50 per cent. does not, provided it is labelled as a mixture, amount *per se* to evidence of fraud.

In *Sandys* v. *Rhodes* (1903), 67 J.P., 352, an inspector asked to be supplied with sago, and was supplied with pearl tapioca of a quality and description which by the custom of the trade was sold as sago. Held that the justices might find that the sale was not to the prejudice of the purchaser, 'because,' as Lord Alversone said, 'the two articles were of the same value, and for a considerable number of years the public have asked for and bought this quality and description of tapioca by the name of sago, so as to establish a custom in the trade to sell this quality and description of tapioca by the name of sago.'

This case has been founded on as justifying a grocer in supplying a mixture of coffee and chicory in answer to a demand for coffee, the seller contending that an ordinary purchaser, in asking for coffee, expects to be supplied with a mixture of coffee and chicory. This defence was set up in *Bishop* v. *Baillie Bros.*, decided by Sheriff-Substitute Orphoot in the Edinburgh Sheriff Court on July 25, 1907—shortly reported in *Scotsman* of the following day—and, after evidence led by the respondent in proof of the defence, was repelled. A wide door would be opened for defrauding the public if such a defence were allowed, the two articles being entirely different in nature, substance, and quality, and in value.

Questions have arisen as to the sufficiency of labels as notices of mixture. In *Jones* v. *Jones, supra,* the cocoa which was sold in a tin labelled as a mixture was delivered to the purchaser wrapped in a sheet of opaque white paper. The purchaser had no other notice of the mixture, and he had no opportunity of seeing the label. The justices convicted. On an appeal to quarter sessions, the justices were equally divided. On an appeal to the High Court, it was held that the notice was sufficient.

In *Robertson* v. *Pearks, Gunston, and Tee, Limited* (1902), 66 J.P., 42, an inspector purchased half a pound of butter, which was delivered to him wrapped in a paper having on it the following: 'Pearks' Milk-blended Butter.—The butter sold at this establishment is the choicest butter blended with pure English full-cream milk, whereby the percentage of water in the butter is increased to about 20 per cent.' Defendants were convicted. Held by the Recorder at Reading that the conviction was right; that, as the notice did not inform the purchaser that water was added to the butter, or what the percentage of water in butter ought to be, the words 'milk-blended butter' were calculated to mislead, and that the phrase ought to be 'Pearks' Mixture of Butter and Milk'; further, that the purchaser did not know that milk-blended butter only was sold at the shop.

In *Pearks, Gunston, and Tee, Limited,* v. *Houghton* (1902), 1 K.B., 889; 86 L.T., 325, butter blended with milk was sold containing water to the extent of 7·8 per cent. in excess of the statutory limit. It was sold in a wrapper labelled 'Pearks' Butter.' 'This is choicest butter blended with pure English full-cream milk by new and improved machinery, whereby it retains about 20 to 24 per cent. of moisture, and acquires that delicacy of flavour which has made Pearks' butter so famous. This package weighs half-pound, including wrapper.' The package so labelled was enclosed in a second wrapper, which concealed the printed matter. On an appeal to the High Court, it was held that the appellants (the vendors) were not pro-

tected by the label, owing to the same being concealed by the outer wrapper. The ground for distinguishing this case from *Jones* v. *Jones* was stated by Lord Alverstone as follows: 'There the article sold was a tin of cocoa, and it was assumed to be matter of common knowledge that tins had labels on them, and therefore the fact that they were wrapped up when delivered to the purchaser could not prevent the label having the effect of a notice to the purchaser. The question of the sufficiency of the notice is one to be decided on the particular facts of each case, but I doubt whether a purchaser of a pound of butter, on being handed such a packet, could be taken to have notice that there was another label inside the outside wrapper. If, therefore, the inner label were the only defence relied upon by the appellants, I should not be prepared to say that their contention was right.'

[3] See Section 12 of Act of 1899, *infra*, p. 319, for definition of the words 'legibly written or printed.'

[4] It is only necessary that the label should state in general terms that the article is a mixture. It is not necessary to state with what or to what extent it has been mixed (*Otter* v. *Edgely*, and *Jones* v. *Jones*, *supra*). It is submitted that, for the protection of the public, an amendment of the law on this point is required. Examples can be cited of sales of coffee adulterated with chicory in proportions varying from 20 to 80 per cent., and being labelled mixtures. The vendors are protected, although the prices charged for them are not in keeping with the prices of the constituent parts. The public can only be protected by making it compulsory on the vendor to state on the label the proportions of the various articles comprised in the mixture.

9. Abstraction of Part of an Article of Food before Sale.[1]—No person shall, with the intent that the same may be sold in its altered state without notice, abstract from an article of food any part of it so as to affect injuriously its quality, substance, or nature, and no person shall sell[2] any article so altered without making disclosure[3] of the alteration, under a penalty[4] in each case not exceeding twenty pounds.

[1] The main purpose of this section was, apparently, to prevent the abstraction of cream from milk, although it is equally applicable to the abstraction of the ingredients or alteration of any other article, if thereby the article is so altered as injuriously to affect it in quality, substance, or nature.

Comparatively few prosecutions have been brought under this section, most being brought under Section 6. But it will be noticed that the language of this section is wider in its scope than that of Section 6, because, while Section 6 says, 'No person shall sell to the prejudice of the purchaser,' etc., this section says, 'No person shall, with the intent that the same may be sold in its altered state without notice, abstract from an article of food any part of it,' etc.; so that the person who makes the alteration may be prosecuted under this section whether he be the actual seller or not, if he altered an article of food intended to be sold in its altered state.

It was not unusual in milk prosecutions to libel an offence both under Section 6 and this section, but since the decision by the High Court of Justiciary in *Gibson* v. *Fyfe* (1895), 2 S.L.T., case 579, in Scotland, these cases are almost always brought under Section 6, even where the charge is the abstraction of milk-fat. In that case, which was brought under Section 6 only, the analyst's certificate stated that the deficiency in milk-fat was produced 'either by the abstraction of fat or by the addition of skim milk to bring about the same result.' It was contended for the defence that, it being open to doubt on the

analyst's report whether the deficiency might not be due to abstraction, it was incompetent to convict under Section 6; that the Act distinguished between the addition of a foreign substance and abstraction; that, while Section 6 dealt with the former, Section 9 expressly dealt with the latter. The court negatived this contention, and sustained the conviction. The Lord Justice-Clerk stated that it was 'of little consequence whether first milk is skimmed and then added to milk that has not been skimmed, or whether, it being all in one vessel, it is skimmed. The result is the same.'

In *MacKirdy* v. *McKendrick* (1897), 25 R. (J.), 49, 2 A., 435, the complaint libelled a contravention of both sections, although there was only one sale, and penalties of £20 for each offence were craved. It was objected that only one offence was charged, but the complaint was dismissed on other grounds. An appeal to the High Court of Justiciary was sustained, also on other grounds, and this point was not decided. Lord Kincairney stated: 'I think that two offences are charged—contravention of Section 6 and contravention of Section 9—although it may appear on inquiry that only one offence was committed.' It is thought that when the charge is the abstraction of milk-fat it is quite competent and proper to libel a contravention of both sections for the one offence.

[2] It is no defence to a prosecution under this section for the respondent to plead want of knowledge of the alteration at the time of sale unless at the same time he produces in defence a written warranty under Section 25 (*Pain* v. *Boughtwood* (1890), 24 Q.B.D., 353; 62 L.T., 284). In that case a pint of milk had been purchased, and it was found that 28 per cent. of the original fat had been abstracted without disclosure. The seller and his manager both denied knowledge of the abstraction. The magistrate dismissed the summons, but an appeal against the decision was sustained, the court holding that a person selling an altered article could be convicted under this section, although at the time of the sale he was without knowledge of the alteration.

A similar decision was given in the case of *Dyke* v. *Gower* (1892), 1 Q.B. 220; 65 L.T., 760. In that case a retailer of milk put into a pail 8 gallons of unskimmed milk, which she sold to her customers, dipping it out of the pail from time to time with a measure. The sale extended over a space of between four and five hours, during the whole of which time, owing to the neglect of the retailer to keep the milk stirred, the cream was continually rising to the surface. When not more than 2 quarts remained, a pint of milk was purchased by an inspector for analysis, and was found to be deficient in fat to the extent of 33 per cent. The deficiency was not disclosed to the purchaser. The court held on appeal that the seller was guilty of an offence under this section, and that the words 'so altered' referred to a physical alteration of the article, irrespective of the intent with which the alteration is made.

In *Morris* v. *Corbett* (1892), 56 J.P., 649, a similar decision was given. In that case the servant of a dairyman, being short in his supply of milk, bought 2 gallons from another dairyman, and mixed it with his own, and sold the mixed milk to his customers. An inspector bought ½ pint of it, and it was found to be deficient in fat to the extent of 20 per cent. It was held that, although neither the dairyman nor his servant knew, or had reason to know, that the fat had been abstracted, this was no defence, and that the case was governed by *Pain* v. *Boughtwood* and *Dyke* v. *Gower, supra.*

It is no defence to a prosecution under this section for the vendor to put forward a special contract between him and his customer. In *Fecitt* v. *Walsh* (1891), 2 Q.B., 304; 65 L.T., 82, the appellant contracted to supply milk to a workhouse at a certain price under a contract, which provided that the milk was to contain a certain percentage of fat, was to be tested on delivery, and a reduction was to be made on the price in respect of any deficiency in fat. Samples were to be taken from each of the cans in which the

daily supply was delivered. While the daily supply in five cans was being delivered, an inspector, under Section 3 of the Act of 1879, procured a sample from each of the five cans, and on analysis it was found that there was a large deficiency of fat in two of the samples. Separate informations under this section were laid against the vendor (the appellant) in respect of these two samples. The justices convicted, and imposed a separate penalty upon each information. On appeal, it was held that the provisions in the contract as to deficiency of cream were immaterial in the determination of the question whether the appellant had committed an offence under the Act. It was also held that the procuring of each sample was a separate transaction, and that the appellant had committed an offence as to each of the two cans.

[3] As to what is 'sufficiency of disclosure,' the following decisions have been given :

In *Jones* v. *Davies* (1893), 69 L.T., 497 ; 57 J.P., 808, the appellant (Jones) purchased from the respondent (Davies) a tin of condensed milk. At the time of purchase the attention of the purchaser was not called to any label on the tin ; but he saw on it a label with 'Condensed Milk : Swiss Dairy Brand,' in large letters, and in smaller type on the back of the tin, 'Swiss Dairy Brand.' This tin contains skimmed milk prepared with the finest sugar. It will be found cheaper than ordinary fresh milk, and useful for all household purposes. The Condensed Milk Company of Ireland (Limited), Limerick.' It was proved that 93 per cent. of the butter-fat had been abstracted. The court held that there had been sufficient disclosure that the milk had been skimmed before condensation. This decision was followed in *Platt* v. *Tyler* (1894), 58 J.P., 71.

But see Section 11 of Act of 1899, which provides that every tin or other receptacle containing condensed, separated, or skimmed milk must bear a label clearly visible to the purchaser.

In *Spiers and Pond* v. *Bennett* (1896), 2 Q.B., 65 ; 74 L.T., 697, the appellants (Spiers and Pond) entered into a contract with a dairy company for the supply of milk, the contract containing a warranty by the company as to the purity of the milk to be supplied. Milk delivered under the contract was found deficient in fat to the extent of 17 per cent. The deficiency was caused by the milk being poured into a vessel by one of the appellants' servants in such a way that the milk poured into the vessel contained a greater proportion of cream than the milk remaining in the vessel from which the milk was poured. Upon a glass in which milk was served to a purchaser were engraved the words, 'Not guaranteed as new or pure milk, or with all its cream : see notices,' and upon the counter was a notice to the effect that all milk purchased by the appellants was purchased by them under a warranty of its purity and genuine quality ; that they took all possible precautions to insure its supply to their customers in proper condition, but were unable to guarantee it as new, pure, or with all its cream, and, therefore, did not sell it as such. It was held by the High Court (reversing the decision of the magistrate) that, assuming that the facts showed an abstraction from the milk, there had been a sufficient disclosure by the appellants of the alteration to satisfy the requirements of the section.

In *Petchey* v. *Taylor* (1898), 62 J.P., 360 ; 78 L.T., 501, a tin of condensed milk was sold as condensed skimmed milk. On the tin were printed the words, 'This tin contains skimmed milk.' The tin, in fact, contained separated milk, from which 97 per cent. of the original fat had been abstracted. It was proved as a fact that no more than 63 per cent. of the original fat could be abstracted by the process of skimming. It was held that the label did not give proper and sufficient notice of the alteration on the milk.

By Section 11 of the Act of 1899, every tin or receptacle containing condensed, separated, or skimmed milk must bear a label in large, legible type, and clearly

visible to the purchaser, on which the words, 'Machine-skimmed Milk' or 'Skimmed milk,' as the case may require, are printed in large and legible type, under penalty for a contravention not exceeding £10.

[4] Section 17 of the Act of 1899 imposes a penalty on a second conviction not exceeding £50, and upon any subsequent conviction not exceeding £100; and where a person guilty of an offence is liable to a fine not exceeding £50, and the offence, in the opinion of the court, was committed by the personal act, default, or culpable negligence of the accused, he is liable, if the court is of opinion that a fine will not meet the circumstances of the case, to imprisonment, with or without hard labour, for a period not exceeding three months.

10. Appointment and Duties of Analysts, and Proceedings to obtain Analysis.—In the City of London and the liberties thereof the Commissioners of Sewers of the City of London and the liberties thereof, and in all other parts of the metropolis the vestries and district boards acting in execution of the Act for the better local management of the metropolis,[1] the court of quarter sessions of every county,[2] and the town council of every borough having a separate court of quarter sessions, or having under any general or local Act of Parliament or otherwise a separate police establishment, may, as soon as convenient after the passing of this Act, where no appointment has been hitherto made, and in all cases as and when vacancies in the office occur, or when required so to do by the Local Government Board, shall, for their respective city, districts, counties, or boroughs, appoint one or more persons possessing competent knowledge, skill, and experience, as analysts of all articles of food and drugs sold within the said city, metropolitan districts, counties, or boroughs, and shall pay to such analysts such remuneration as shall be mutually agreed upon, and may remove him or them as they shall deem proper; but such appointments and removals shall at all times be subject to the approval of the Local Government Board, who may require satisfactory proof of competency[3] to be supplied to them, and may give their approval absolutely or with modifications as to the period of the appointment and removal, or otherwise: provided that no person shall[4] hereafter be appointed an analyst for any place under this section who shall be engaged directly or indirectly in any trade or business connected with the sale of food or drugs in such place.

In Scotland the like powers shall be conferred, and the like duties shall be imposed upon the commissioners of supply[5] at their ordinary meetings for counties, and the commissioners or boards of police, or where there are no such commissioners or boards, upon the town councils for boroughs[6] within their several jurisdictions; provided that one of her Majesty's Principal Secretaries of State in Scotland shall be substituted for the Local Government Board of England.[7]

In Ireland the like powers and duties shall be conferred and imposed respectively upon the grand jury of every county and town council of every borough, provided that the Local Government Board of Ireland shall be substituted for the Local Government Board of England.

[1] By Section 4 (1) of the London Government Act, 1899 (62 and 63 Vict., c. 14) elective vestries and district boards in the County of London are abolished and their powers and duties as from November 1, 1900, are transferred to the burgh councils created by that Act.

[2] By Section 3 of the Local Government Act, 1888 (51 and 52 Vict., c. 41) the administrative business of quarter sessions is transferred to county councils, including the appointment, removal, and fixing the remuneration of public analysts.

[3] See Section 3 (5) of Act of 1899 and note thereto as to proof of competency required.

[4] By Section 3 (1) of the Act of 1899 the appointment of a public analyst by every local authority is made compulsory.

[5] Now the County Council Local Government (Scotland) Act, 1899 (52 and 53 Vict., c. 50, s. 11 [1]).

[6] Section 33 (6) defines 'borough' in Scotland as 'any royal burgh and any burgh returning or contributing to return a member to Parliament.' See also Burgh Police (Scotland) Act, 1892, s. 432, which provides that 'the commissioners of any burgh under this Act shall be the local authority under the Sale of Food and Drugs Act, 1875.' By Sections 7 and 8 of the Town Councils (Scotland) Act, 1900, commissioners of burghs cease to exist, and their rights, powers, authorities, and duties are vested in town councils.

[7] This provision vested the powers and duties of enforcing the Acts in the Secretary for Scotland, but the Act of 1899, s. 23, transfers these powers and duties to the Local Government Board for Scotland.

11. Town Council of a Borough may engage the Analyst of another Borough or of the County.—The town council of any borough may agree that the analyst appointed by any neighbouring borough, or for the county in which the borough is situated, shall act for their borough during such time as the said council shall think proper, and shall make due provision for the payment of his remuneration, and if such analyst shall consent, he shall during such time be the analyst for such borough for the purposes of this Act.

12. Power to Purchaser of an Article of Food to have it Analysed.—Any purchaser of an article of food or of a drug in any place being a district, county, city, or borough where there is any analyst appointed under this or any Act hereby repealed shall be entitled, on payment to such analyst of a sum not exceeding ten shillings and sixpence, or if there be no such analyst then

acting for such place, to the analyst of another place, of such sum as may be agreed upon between such person and the analyst, to have such article analyzed by such analyst, and to receive from him a certificate of the result of his analysis.

The decisions under this section have mainly had reference to the question whether a private purchaser who purchased an article for consumption could prosecute for adulteration without complying with the provisions of Section 14. The Court of Queen's Bench, in the case of *Buckler* v. *Wilson* (1896), 1 Q.B., 83 ; 73 L.T., 580, has authoritatively decided this question in the affirmative, and that, in the case of such a purchase, the analysis need not be made by an official analyst. It seems to be clear that the certificate of the analyst in such a prosecution would not be accepted as *prima facie* evidence of the facts therein stated, as provided in Section 21, as the expression 'such proceeding' in that section applies to proceedings under Section 20, where a sample has been taken by an officer for analysis under Section 13. It will, therefore, be necessary for the analyst in the case of a prosecution in respect of a private purchase to attend the trial and prove the analysis.

In a prosecution in respect of a private purchase, a copy of the certificate will require to be served upon the accused, along with the summons or complaint (Section 19 of the Act of 1899), which provides for the service of a copy of the certificate 'in any prosecution.'

See *Wilson* v. *McLaughlin*, (1907), S.C. (J.), 61 ; 44 S.L.R., 469 (fully referred to under Section 33 [9]), where Lord Ardwall said: 'I have therefore no hesitation in saying that the persons who are authorized to institute proceedings, whether a purchaser under Section 12 or an official under Section 13, are entitled to prosecute complaints such as the present, as private prosecutors at their own instance, without concurrence of the Procurator Fiscal or other public prosecutor.'

13. Officer named to obtain a Sample of Food or Drug to submit to Analyst.—Any medical officer of health, inspector of nuisances, or inspector of weights and measures, or any inspector of a market, or any police constable[1] under the direction and at the cost of the local authority appointing such officer, inspector, or constable, or charged with the execution of this Act,[2] may procure any sample of food or drugs, and if he suspect the same to have been sold to him contrary to any provision of this Act, shall submit[3] the same to be analyzed by the analyst of the district or place for which he acts, or if there be no such analyst then acting for such place, to the analyst of another place, and such analyst shall, upon receiving payment as is provided in the last section, with all convenient speed analyze[4] the same and give a certificate[5] to such officer, wherein he shall specify the result of the analysis.

[1] By Sections 1 (3) and 2 of the Act of 1899, the Commissioners of Customs, the Local Government Board, and the Board of Agriculture are in certain circumstances empowered to take samples of articles of food, and for this purpose their officers have the same powers as inspectors under the Act.

See Section 2 of the Act of 1907, which empowers officers of the Board of Agriculture and Fisheries, or of the Local Government Board, and in certain cases officers of a local authority, to take samples in butter factories and in

premises registered for the manufacture of margarine, margarine cheese, and milk-blended butter.

In *Hale* v. *Cole* (1891), 55 J.P., 376, it was decided that, where a constable who made a purchase for analysis prosecuted for a contravention of the Act, it was not necessary to prove as a condition precedent that he was directed to prosecute by the local authority by whom he was appointed.

In *Connor* v. *Butler* (1902), 2 I.R., 569, it was held by a majority of the judges of the King's Bench Division in Ireland that the local authority had performed its duty by appointing an inspector, and that when an inspector has once been appointed, he may take proceedings at his own discretion, and without any special authorization from the local authority appointing him.

[2] The person appointed to prosecute must be any one or more of the officials named, but the appointed officer need not personally make the purchase. The purchase may be made by a deputy. The officers charged with the execution of the Act became so well known that, if purchase by them personally were necessary, the execution of the Act would in many cases be impossible. The cases in which purchase by deputy has been sustained are *Horder* v. *Scott* (1880), 5 Q.B.D., 552; 42 L.T., 660; *Smith* v. *Stace* (1881), 45 J.P., 141; *Garforth* v. *Esam* (1892), 56 J.P., 521; *Macaulay* v. *MacKirdy* (1893), 20 R. (J.), 58, 3 W., 464; *Massey* v. *Kelso* (1902), 4 F. (J.), 73. A police constable acting under the instructions of an officer duly appointed under the Act is an officer within the meaning of the section. *Farley* v. *Higginbotham* (1898), 42 S.J., 309; 104 L.T.J., 410.

[3] There is no time stipulated within which the sample must be submitted, but it should be done immediately. Proceedings cannot be instituted after the expiry of twenty-eight days from the time of the purchase, and the summons or complaint must, with a copy of the analyst's certificate, be served upon the accused not less than fourteen days before the day fixed for the hearing (Act of 1899, Section 19 [1]).

[4] In the case of a purchase for analysis the analysis is a condition precedent to a prosecution (*Peart* v. *Barstow* (1880), 44 J.P., 699; *Smart and Son* v. *Watts* (1895), 1 Q.B., 219; 71 L.T., 768), but this is not so in the case of a private prosecution (*Buckler* v. *Wilson* (1896), 1 Q.B., 83; 73 L.T., 580).

[5] The time within which the certificate must be given is not fixed, but it should be given without delay, for the reasons explained in note 3, *supra*. See Section 18 and Schedule as to form of certificate.

See Section 3 of Act of 1879, and Section 14 of Act of 1899, conferring power upon officers named in this section to take samples on delivery.

14. Provision for Dealing with the Sample when Purchased.—The person purchasing[1] any article with the intention of submitting the same to analysis shall, after the purchase shall have been completed, forthwith[2] notify to the seller or his agent[3] selling the article his intention to have the same analyzed by the public analyst,[4] and shall [*offer to*][5] divide the article into three parts, to be then and there separated, and each part to be marked and sealed or fastened up in such manner as its nature will permit, and shall, if required to do so, [*procced accordingly, and shall*][5] deliver one of the parts to the seller or his agent.[6]

He shall afterwards retain one of the said parts[7] for future

comparison, and submit the third part, if he deems it right to have the article analyzed, to the analyst.

[1] After decisions in the English High Court to the contrary (*Parsons* v. *Birmingham Dairy Company* (1882), 9 Q.B.D., 172; 46 J.P., 727; and *Harris* v. *Williams* (1889), 6 T.L.R., 47), it is now settled that the words 'person purchasing' do not refer to a private purchaser for consumption, but to a purchaser for analysis. This has been authoritatively settled by the cases of *Buckler* v. *Wilson* (1896), 1 Q.B., 83; 73 L.T., 580, following the decision of the Irish judges in the case of *Enniskillen Union* (*Guardians*) v. *Hilliard* (1884), 14 L.R. (Irish), 214. In delivering judgment in *Buckler* v. *Wilson*, Lord Russell of Killowen said: 'I agree with the reasoning of the learned judges in the Irish case, and I entirely adopt the view of the Act expressed by them. It seems to me that to adopt the contention of the appellant in this case would be to largely restrict the operation of a salutary Act, and to exclude that class of cases, of which the present is an example, where there is a contract for the delivery of provisions within the Act, which may extend over a considerable period of time, and also the class of cases in which provisions are purchased from time to time in small bulk, without any suspicion at the time of purchase of any deceit being practised by the seller.'

This section does not apply to a purchase of a sample on delivery under Section 3 of the Act of 1879, and Section 14 of the Act of 1899; and it is not necessary for the officer procuring such sample to notify to the seller or his agent that he intends to have the sample analyzed; nor is it necessary to deliver to the seller or his agent a portion of the sample, *Rouch* v. *Hall* (1880), 6 Q.B.D., 17; 45 J.P., 220; *Rolfe* v. *Thompson* (1892), 2 Q.B., 196; 67 L.T., 295. In *Morton* v. *Fyfe* (1896), 24 R. (J.). 9; 2 Adam, 174, a similar decision was given, but it was stated by the judges that they so decided with hesitation, and only in deference to the decision in the two English cases above cited. These decisions, however, are not now authoritative as to milk, margarine, or margarine cheese, as, by Section 10 of the Act of 1899, the person taking a sample of milk in course of delivery, or of margarine or margarine cheese forwarded by a public conveyance, must forward a portion of the sample to the consigner, if his name appear on the can or package containing the article sampled. See note 7 to Section 3 of Act of 1879, p. 298.

[2] There are two decisions as to the meaning of 'forthwith.' In *Parsons* v. *Birmingham Dairy Company* (1882), 9 Q.B.D., 172; 46 J.P., 727, it was held that notice given two days after the delivery of the article was not given 'forthwith.' On the other hand, in the case of *Somerset* v. *Miller* (1890), 54 J.P., 614, an inspector sent a constable in plain clothes into the respondent's inn to purchase a bottle of gin. Two minutes after the constable had left the shop with the gin-bottle both men went inside and told the seller that the gin had been purchased for analysis, and divided it as required by the section. It was held by the High Court (reversing the decision of the justices) that the purchase had been notified 'forthwith.'

[3] In *Rouch* v. *Hall*, *supra*, where the sample was taken on delivery at a railway-station, it was held that a railway porter with whom the third-part sample was left, and who was told that the purchase was made for analysis, was not the agent of the seller for the purpose of receiving notification.

[4] In *Barnes* v. *Chipp* (1878), 3 Ex. D. 176; 38 L.T., 570, it was held to be a condition precedent to a prosecution that the officer purchasing should notify to the seller or his agent that he intended to have the sample analysed by the public analyst, and that it was not sufficient to say simply that the article had been bought for analysis, without saying 'by the public analyst.'

In the case of *Wheeker* v. *Webb* (1887), 51 J.P., 661, the seller was informed that the article was to be examined by the 'county analyst.' The seller knew that the 'county analyst' was the 'public analyst.' The notice was held to be sufficient. Mr. Justice Cave said: 'No particular form of words is required, nor even any words at all. What is necessary is that the seller must know that the samples are to be taken for the purposes of analysis, so that he may see that they are fairly taken. . . . The case of *Barnes* v. *Chipp* is no authority for more than this—that the seller must know that the analysis is to be made by an official person. In that case the court came to the conclusion that the seller did not know that there was to be an official analysis. That was a totally different case from this, for here the justices have found that the seller did know that there was to be an official analysis.' The safe course is to give notice in the exact words of the section.

Notification to the seller is a condition precedent to a prosecution, notwithstanding the fact that the seller, when the purchase was made, admitted adulteration (*Smart and Son* v. *Watts* (1895), 1 Q.B., 219).

[5] The words italicized and in square brackets are repealed by Section 13 of the Act of 1899.

[6] In *Mason* v. *Cowdary* (1900), 2 Q.B., 419; 82 L.T., 802, an inspector bought six bottles of camphorated oil for the purpose of analysis. He divided them into three lots of two bottles each, putting each lot into a separate bag, and sealing them. He handed one of the lots to the seller, sent another for analysis, and retained the third. He did not open the bottles or mix or divide their contents, and there was no evidence that all the bottles were identical. It was held that he had not complied with the requirements of the section. This case was distinguished in *Smith* v. *Savage* (1905), 1 K.B., 88; 21 T.L.R., 424, where the purchaser asked for cream of tartar, which was put up in penny packets, of which he bought four. He emptied the contents into one heap, mixed them, and divided the mixture into three parts, and otherwise dealt with them as required by this section. Held that each packet was not a separate article, and that the section had been complied with.

The case of *Crawford* v. *Harding* (1906), 14 S.L.T., 422, shows the necessity of exercising the utmost care in taking samples. The appellant (Crawford) forwarded to a co-operative store 22 gallons of milk in three cans, two containing 8 gallons each and one containing 6 gallons. The milk was delivered under a contract of sale by which the appellant guaranteed the milk to be 'pure milk, and in conformity with the requirements of the Board of Agriculture, September 1, 1901.' Into one large vessel 20 gallons or thereby were poured into the contents of the two 8-gallon cans, and about 4 gallons from the 6-gallon can, and into another vessel were poured the remaining 2 gallons or thereby from the 6-gallon can. It was intended by the consignees that the public should be served with sweet milk by retail from these two vessels. As each vessel was filled an inspector, who had been present and watching the process, took therefrom a sample as on delivery for analysis. This he did by dipping into each vessel the tin dipper used at the dairy for that purpose, and pouring the contents into a jug. From the jug he poured the milk, in each case, into three bottles used for such samples, sealed the bottles up, and made the statutory intimation. The analysis showed that, while the sample taken from the 20-gallon vessel contained 3·05 per cent. of milk-fat, the sample taken from the vessel containing 2 gallons or thereby contained only 2·8 per cent. of milk-fat, thus showing a deficiency in the milk sampled from the latter vessel of 6 per cent. under the standard. In a prosecution with reference to the latter sample the appellant explained that the deficiency might have arisen by the fatty portion of the milk having risen to the top of the 6-gallon milk-can, and been poured away with the first

4 gallons emptied therefrom into the 20-gallon vessel. The sheriff convicted. On appeal, the conviction was quashed, on the ground that the sample taken from the 2 gallons at the bottom of the can was not a fair sample of the contents of the can. In giving judgment, Lord Low said : ' The milk in the 8-gallon cans admittedly contained a larger percentage of milk-fat than the minimum required by statute. The milk, therefore, in these cans was unobjectionable. In regard to the 6-gallon can, if the milk which it contained had been found to fall short of the minimum (3 per cent.), the conviction might have been justified. But, in my opinion, that has not been proved. What was proved was that, after 4 gallons of the 6 gallons contained in the can had been immixed with the 16 gallons of milk taken from the two 8-gallon cans, the remaining 2 gallons only contained 2·8 per cent. of milk-fat. But what was the percentage of milk-fat contained in the 4 gallons which had been poured out no one knows. That, indeed, would not have been material if it were possible to say that the percentage of fat in the milk at the bottom of the can was necessarily the same as in the milk at the top of the can. But that is not the case. The fat has a tendency to rise, and it is proved that if the can had been at rest for a considerable time the fat would have risen to the top, with the result that the milk at the top of the can would have contained a much larger percentage of fat than the milk at the bottom of the can. . . . The result, therefore, is (1) that it was not proved that the can had not been at rest after being filled for a sufficient time to allow of the fat rising to the top to an appreciable extent ; and (2) that if the can was full (a point in regard to which there was no evidence), the oscillation of the cart would only have prevented the fat rising to the top " to a considerable extent." So standing the evidence, I think that it is impossible to say that the sample taken from the 2 gallons at the bottom of the can was a fair sample of the contents of the can, or that an analysis of that sample can be held as proving that the 6 gallons which the can contained did not, when taken together, contain the requisite percentage of milk-fat.'

In *Lowery* v. *Hallard* (1906), I.K.B., 398 ; 22 T.L.R., 186, it was held that the three parts need not be exactly equal, but that each must be of sufficient size to enable a satisfactory analysis to be made.

[7] In *Hutchison* v. *Stevenson* (1902), 4 F. (J.), 69 ; 3 Adam, 651, the respondent was charged with a contravention of Section 6 of this Act by selling adulterated milk. At the hearing of the complaint the respondent called for the production of the third sample in order that it might be submitted to the Government analyst. The prosecution was unable to produce it, the bottle containing it having been accidentally broken. The Court of Justiciary held that the failure to produce the sample was fatal to a conviction.

The decision in this case was commented upon, and not followed (the circumstances being somewhat different) in the English case of *Suckling* v. *Parker* (1906), 22 T.L.R., 357, which was a prosecution under Section 6 of this Act for selling sweet milk deficient in fat to the extent of 12 per cent. The third-part sample retained by the purchaser when produced at the hearing was found to have fermented, and to have forced the cork out of the bottle, and thus to have allowed part of the contents to escape, so that they were incapable of analysis. It was held (Ridley and Darling, J J.), affirming the decision of the magistrates, that this did not prevent the justices from convicting the accused of the offence under Section 6, if it appeared that the part retained had been properly sealed or fastened as required by Section 14, and the case was sent back to the justices to have the facts stated on this point. The appellant relied on the decision in *Hutchison* v. *Stevenson, supra*. Mr. Justice Ridley, in his judgment, said: ' The point taken was that the statute required not only the production of the third sample, but also that it should be sent to Somerset House and analysed. In support

of that proposition the Scotch case of *Hutchison* v. *Stevenson* was quoted. In that case it appeared that, on the sample being called for, the respondent stated that the bottle containing it had burst some days before, and therefore it could not be produced. The court said that it was a condition precedent to a conviction that the sample should be produced. So far as that went, he thought that followed from Section 21 of the Act of 1875. But in the present case the sample was produced, although it was not in a condition that the authorities at Somerset House could report upon it. In the Scotch case the Lord Justice-Clerk said : " The statute further enacts that if the accused so desires it, he is entitled to have the third sample sent to Somerset House for analysis by the Government analyst there, so that his analysis may be produced in evidence at the trial. That in this case it became impossible, because the third sample, which was retained by the purchaser, had ceased to exist before the trial." That was true, but in the case now before them the sample had not ceased to exist, but it had got into such a condition that it could not be examined. It had been produced. In all probability this point was not present to the Scotch court. It seemed to him that the Act did not say that there could not be a conviction unless the analysis made at Somerset House was produced at the hearing. There was, indeed, a provision in Section 21 of the Act of 1899 making it obligatory on the justices, on the request of either party, to " cause an article of food or drug to be sent to the Commissioners of Inland Revenue for analysis," but there was nothing in that to show that it must be the third sample that must be so sent. It had been argued that it must be the third sample because of the concluding words of Section 14 of the Act of 1875. He did not consider that it followed from those words that it must be the third sample. It was a strong thing to say that if all the preliminary steps had been properly taken, and that if, without any default on the part of the inspector, the third sample was spoiled in some way owing to natural causes, the seller should escape in a case where it was shown that he had sold milk or other article of food not of the nature, substance, or quality demanded.'

15. Provision when Sample is not Divided.—*If the seller or his agent do not accept the offer of the purchaser to divide the article purchased in his presence, the analyst receiving the article for analysis shall divide the same into two parts, and shall seal or fasten up one of those parts, and shall cause it to be delivered, either upon receipt of the sample or when he supplies his certificate to the purchaser, who shall retain the same for production in case proceedings shall afterwards be taken in the matter.*

This section is repealed by Section 27 of the Act of 1899.

16. Provision for sending Article to the Analyst through the Post Office.—If the analyst do not reside within two miles of the residence of the person requiring the article to be analyzed, such article may be forwarded to the analyst through the post office[1] as a registered letter,[2] subject to any regulations which the Postmaster-General may make in reference to the carrying and delivery of such article, and the charge for the postage of such article shall be deemed one of the charges of this Act or of the prosecution, as the case may be.

[1] This method of sending the sample is not compulsory ; other means of conveying it may be used.

[2] Section 15 of the Act of 1899 substitutes 'registered parcel.'

17. Person refusing to Sell any Article to any Officer Liable to a Penalty.—If any such officer, inspector, or constable, as above described,[1] shall apply to purchase any article of food or any drug exposed to sale,[2] or on sale by retail on any premises or in any shop or stores,[3] and shall tender the price for the quantity[4] which he shall require for the purpose of analysis, not being more than shall be reasonably requisite, and the person exposing the same for sale shall refuse to sell[5] the same to such officer, inspector, or constable, such person shall be liable to a penalty not exceeding ten pounds.[6]

[1] This section does not apply to private purchasers, but it applies to purchases by officers of the Local Government Board and Board of Agriculture under Section 2 of the Act of 1899.

[2] This section applies to food exposed for sale, either wholesale or retail. This was decided by the case of *McHugh* v. *McGrath* (1894), 2 Irish Reports, 71, where a farmer selling butter at a butter market refused to break bulk on an officer applying to purchase 1 pound of butter for analysis. The court held that this section applied to sales by wholesale as well as retail, and that the farmer should be convicted.

[3] By Section 5 of the 1879 Act it is enacted that the words 'premises' and 'shop or stores' shall extend to 'any street or open place of public resort.'

[4] Section 18 of the 1899 Act enacts that, where an article of food or drug is exposed for sale in an unopened tin or packet duly labelled, a seller is not bound to sell it except in such tin or packet.

[5] In the case of *Payne* v. *Hack* (1894), 58 J.P., 165, in which a contravention of this section was charged, one of the questions raised was whether an officer, when applying to purchase an article for analysis, is entitled to demand that he be supplied out of a particular vessel. The officer asked for rum, and was supplied out of a bottle; after tasting it, he asked for ½ pint of rum. The publican was about to supply it from another vessel, but the officer demanded that he should be supplied from the bottle from which the first quantity he got was drawn. The publican refused. He was summoned and convicted, and on appeal the conviction was sustained, the court holding that the publican was bound to supply the officer from the same bottle as that from which he first supplied him. Bruce, J., said: 'Nothing would be easier than for the seller to keep two vessels and supply purchasers out of one when the article was intended for consumption, and to supply out of the other when the article was intended for analysis.'

A similar decision was given by the High Court of Justiciary in Scotland in *Soutar* v. *Kerr* (1907), S.C. (J.), 49; 14 S.L.T., 875. An inspector applied to purchase from the respondent three-halfpenny worth of sweet milk out of a can on his cart, and out of the cran of the can, in the same way as the respondent was supplying out of the can to his ordinary customers. The respondent refused, but offered to supply the inspector from the top of the can instead of from the cran thereof as demanded. In a prosecution in which the respondent was charged with a contravention of this section, and alternatively with a contravention of Section 16 of the Act of 1899 (impeding the officer in the discharge of his duty), an objection taken on behalf of the respondent to the relevancy of the charge under both sections was sustained

by the sheriff, and the complaint dismissed. On an appeal to the High Court of Justiciary the decision was upheld as regards the charge under Section 16 of the Act of 1899, but reversed as regards the charge under this section. The courts (Lords Mackenzie, Dundas, and Ardwall) found that 'an inspector duly appointed under the Sale of Food and Drugs Acts, applying to purchase a sample of sweet milk from a can out of which a retailer is selling and tendering the price, is entitled to demand to be supplied in the same manner as that in which the retailer was on the occasion libelled supplying the public.

A second question in *Payne* v. *Hack*, *supra*, was whether an officer, when applying to purchase an article for analysis, is bound to show his authority. The person refusing to sell did not in this case demand to see the officer's authority, and it was held, in these circumstances, that he was not bound to show it; but Kennedy (J.) stated he was inclined to think that if the officer had no badge or mark to show his authority—*e.g.*, being dressed in plain clothes, and being unknown to the seller—it would be necessary for the officer to show that authority if the seller so demanded, before it could be held that the seller had refused to sell within the meaning of the statute.

In *Farley* v. *Higginbotham* (1898), 42 S.J., 309, a policeman, on the order of an inspector, asked the servant of a shopkeeper for half a pound of coffee, and was supplied. He tendered in payment 2s., and received 1s. 3d. change. On being told that the coffee had been purchased for analysis, and as the policeman, who had divided the coffee into three parts, was writing out the labels, the defender's manager, who had entered the shop, seized the coffee and upset it on the floor. The policeman demanded another half-pound of the same coffee, and was refused. He was offered back his money, but refused it, and no second tender of money was made. Held that there had been a refusal to sell, that the fact that no second tender had been made was immaterial, and that the shopkeeper was liable for the act of his servant.

In *Hewson* v. *Gamble* (1892), 56 J.P., 534, the facts were somewhat similar. An inspector had bought and paid for a sample of coffee. When told that it had been bought for analysis, the seller snatched it out of the inspector's hand, informed him that it was not sold as pure coffee, pointed to a label on the tin, and offered the inspector his money back, which was refused. Held that the snatching and keeping of the tin was not larceny, there being no evidence of felonious intent, but that the seller was liable to a prosecution under Section 16 of the Act of 1899, for obstructing the inspector in the course of his duty.

[6] Section 17 of the Act of 1899, imposing increased penalties for subsequent offences, does not apply to offences under this section.

18. Form of the Certificate.—The certificate of the analysis shall be in the form set forth in the schedule hereto, or to the like effect.

For notes on decisions relative to the sufficiency of the certificate as evidence, see Section 21, p. 268. For those relating to the form of certificate, see Schedule, p. 292.

19. Quarterly Report of the Analyst.—Every analyst appointed under any Act hereby repealed or this Act shall report quarterly to the authority appointing him the number of articles analyzed by him under this Act during the foregoing quarter, and shall specify the result of each analysis and the sum paid to him

in respect thereof, and such report shall be presented at the next meeting of the authority appointing such analyst, and every such authority shall annually transmit to the Local Government Board, at such time and in such form as the Board shall direct, a certified copy of such quarterly report.

20. Proceedings against Offenders.—When the analyst having analyzed any article shall have given his certificate[1] of the result, from which it may appear that an offence against some one of the provisions of this Act has been committed, the person causing the analysis to be made[2] may take proceedings for the recovery of the penalty herein imposed for such offence before any justices[3] in petty sessions assembled having jurisdiction in the place where the article or drug sold was actually delivered to the purchaser,[4] in a summary manner.

Every penalty imposed by this Act shall be recovered in England in the manner prescribed by the eleventh and twelfth of Victoria, chapter forty-three. In Ireland such penalties and proceedings shall be recoverable, and may be taken with respect to the police district of Dublin metropolis, subject and according to the provisions of any Act regulating the powers and duties of justices of the peace for such district, or of the police of such district; and with respect to other parts of Ireland, before a justice or justices of the peace sitting in petty sessions, subject and according to the provisions of the Petty Sessions (Ireland) Act, 1851, and any Act amending the same.

Every penalty herein imposed may be reduced or mitigated according to the judgment of the justices.[5]

[1] A certificate by a public analyst is a condition precedent to a prosecution by any of the officers named in Section 13; see *Peart* v. *Barstow* (1880), 44 J.P., 699; *Smart and Son* v. *Watts* (1895), 1 Q.B., 219. It is not a condition precedent to a private prosecution that the terms of Section 14 should be complied with by notifying the vendor that the article had been purchased for analysis; *Buckler* v. *Wilson* (1896), 1 Q.B., 83; 73 L.T., 580.

It is not necessary that the contents of the certificate should be embodied in the complaint, nor is it a fatal defect that the complaint avers that the certificate bears what in point of fact it does not bear, provided an offence under the statute is relevantly libelled. In *Wilson* v. *McLaughlin* (1907), S.C. (J.), 61; 14 S.L.T., 850, the respondent was charged with two offences—viz., (1) with a contravention of Section 6 of this Act, by selling as butter what was proved by the analyst's certificate to be margarine; and (2) with a contravention of Section 6 of the Margarine Act of 1887 by selling the article proved to be margarine, and that otherwise than in a package duly branded or duly marked 'Margarine,' and by delivering it in a paper wrapper on which the word 'Margarine' was not printed, as required by the Act. The complaint libelling the first offence set forth that the respondent, in answer to a demand for butter, sold to the complainer to his prejudice as butter, and delivered to him 'an article, or quantity of material of the weight of a pound or thereby, which was not of the nature, substance, and quality of butter, but was "margarine."'

The analyst, in his certificate (a copy of which was served with the complaint), said : ' I am of opinion that the said sample is not of the nature, substance, and quality of butter in respect that the fat contains 95 per cent. or thereby of fatty matter not derived from milk, and, therefore, extraneous to butter.' At the hearing before the sheriff it was stated in defence, among numerous other objections to the complaint, ' that the contents of the analyst's certificate were insufficiently libelled, and that the complaint affirms that the certificate bears what in point of fact it does not bear.' The Sheriff-Substitute sustained this and another objection, and dismissed the complaint. On an appeal to the High Court of Justiciary (Lords Ardwall, Dundas, and Mackenzie), the judgment of the sheriff was recalled. In delivering the judgment of the court, Lord Ardwall said : ' There are only two questions now submitted for our decision in the case. They relate to the objections to the competency of the complaint—viz., (4) that the contents of the analyst's certificate were insufficiently libelled, and that the complaint affirms that the certificate bears what in point of fact it does not bear ; and (7) that the prosecutor was not personally present in court, but was represented by a Law agent. With regard to the first of these objections, it must be noticed that it contains two distinct branches. With regard to the first branch, I know of no authority which makes it obligatory for the complainer to set forth the analyst's certificate in the complaint. With regard to the second branch, I think the insertion of the word " margarine " in the complaint which does not appear in the analyst's certificate is surplusage, but it does no harm. The suggestion is that the respondent was misled thereby, but I do not think that that contention can be supported, as the analyst's certificate, which gave him full information, was in terms of the statute served on him along with the complaint. On these grounds I am of opinion that this objection ought to have been repelled.' His lordship then discussed the other objection as to the right of the prosecutor to be represented in court by an agent, and repelled it also (as to this objection, see note 6 to Section 33 (9), *post*, p. 286).

[2] See p. 312 as to power of local inspectors to take proceedings under this section, although the person who took samples and caused the analysis to be made was an officer of the Irish Agriculture Department.

See Section 33 (9) as to the persons entitled to sue for penalties in Scotland, and for notes of several decisions on questions recently much discussed in Scotland as to whether the officers named in Section 13 are entitled to instruct a solicitor to sign complaints and conduct the proceedings in court on their behalf.

[3] For ' Justices ' in Scotland substitute ' Sheriff '—Section 33 (4)—and ' Sheriff ' includes Sheriff-Substitute—Section 33 (35).

[4] See Section 20 (5) of Act of 1899, which provides that proceedings against persons for giving a warranty may be taken either in the place where the article of food or drug to which the warranty relates was purchased for analysis, or before a court having jurisdiction in the place where the warranty was given.

[5] In Scotland all penalties can be modified as provided in Section 6 of the Summary Jurisdiction (Scotland) Act, 1881.

In *Pearks, Gunston, and Tee, Limited*, v. *Richardson* (1902), 1 K.B., 91 ; 66 J.P., 119, it was held that a summons to appear to an information under this Act can only be served on a limited company in the manner prescribed by Section 62 of the Companies Act, 1862—that is, by being left at or sent to the registered office of the company. Query : Would this hold good in Scotland, or could a limited company carrying on business, and contravening the Act in a different sheriffdom from that in which the registered office was situated,

be lawfully cited at the place of business in the sheriffdom where the offence was committed ? It is thought that they could, because a prosecution of a limited liability company for recovery of penalties is a civil, and not a criminal proceeding, imprisonment of a limited liability company not being competent (Summary Procedure (Scotland) Act, 1864, Section 28)—*Lindsay* v. *Low and Co.* (1902), 4 F. (J.), 45 ; *Braid* v. *Swan and Sons, Limited* (1903), 5 F., 579. It seems, therefore, competent to cite limited liability companies in a prosecution for recovery of penalties at their place of business within the jurisdiction where the offence was committed, although the registered office of the company is outside the jurisdiction. See Sheriff Court Act, 1876 (39 and 40 Vict., c. 70), Section 46 (3), which provides that a person ' carrying on a trade or business, and having a place of business within a county, shall be subject to the jurisdiction of the sheriff thereof in any action, notwithstanding that he has his domicile in another county.' By Section 3 of the same Act ' person ' includes ' company.'

21. Certificate of Analyst prima facie Evidence—Defendant and his Wife may be Examined.—At the hearing of the information[1] in such proceeding[2] the production of the certificate of the analyst shall be sufficient evidence[3] of the facts therein stated, unless the defendant[4] shall require that the analyst shall be called as a witness, and the parts of the articles retained by the person who purchased the article shall be produced,[5] and the defendant may, if he think fit, tender himself and his wife to be examined on his behalf, and he or she shall, if he so desire, be examined accordingly.

[1] ' Information.' In Scotland this means ' complaint.'

[2] This clearly means the proceeding under Section 20, which refers to prosecutions at the instance of an officer, who purchased for analysis under Section 13, against the person from whom the sample was bought, and does not apply to proceedings where the article was not bought for analysis (*Buckler* v. *Wilson* (1896), 1, Q.B., 83 ; 73 L.T., 580).

The certificate obtained by an officer purchasing for analysis cannot be used as evidence against a wholesale seller who is prosecuted for giving a false warranty. *R.* v. *Smith* (1896), 1 Q.B., 596 ; 74 L.T., 348. The decision in *Tyler* v. *Kingham and Son, Limited* (1900), 2 Q.B., 413 ; 83 L.T., 169, is to the same effect. There a grocer was prosecuted under Section 6 for selling margarine as butter. He produced a warranty from his wholesale seller and was discharged. Proceedings were then taken against the wholesale dealer for giving a false warranty. At the trial the analyst's certificate obtained for the purpose of the original prosecution was tendered to prove that the article sold was really margarine. It was held by Ridley and Bigham (JJ.) that the certificate was not evidence against the wholesale dealer. Mr. Justice Bigham said : ' To produce a document made with reference to another case by a gentleman who is not called as a witness, and to say that it is evidence against these respondents, is absolutely contrary to the law of evidence.'

[3] The decisions as to the sufficiency of the certificate as evidence have been numerous in England and Scotland, and are, it must be confessed, somewhat conflicting.

In the earliest case—*Harrison* v. *Richards* (1881), 45 J.P., 552, the accused was charged with selling milk adulterated, according to the analyst's certificate, with 20 per cent. of water. The analyst was not examined, and no evidence was adduced in defence. The magistrates, thinking that the state

of the milk might be explained by its having stood several hours in a large can, from which the best milk, which would naturally rise to the top, had been ladled out before the purchase, dismissed the summons. On an appeal to the High Court, it was held that, as there was no evidence to contradict the certificate, it was conclusive, and that, therefore, the magistrates ought to have convicted.

In *MacLeod* v. *O'Neil* (1882), 9 R. (J.), 32, decided in the High Court of Justiciary, in the following year, the respondent was charged with adulterating milk by adding thereto 27 per cent. of water. The analyst's certificate to this effect was produced. The analyst was examined, and deponed that, in arriving at the conclusion that the milk had been adulterated as stated in his certificate, he founded on the Somerset House standard. No counter evidence was led, and no attempt was made by the respondent to account for the large percentage of water in the sample. The sheriff dismissed the complaint. In an appeal, the court pronounced no interlocutor, but expressed the opinion that the magistrate trying the case was not bound to convict unless he was satisfied in the whole circumstances that the article was not of the nature, etc., of the article demanded.

In *Fyfe* v. *Hamilton* (1894), 1 A., 484, the respondent was charged with selling milk from which, as the analyst's certificate stated, 15 per cent. of fat had been abstracted. The only evidence adduced by the prosecutor was the analyst's certificate. A certificate from Somerset House was also produced, which certified an abstraction of fat to the extent of 26 per cent. No counter evidence was adduced. The sheriff acquitted the respondent.

An appeal to the High Court of Justiciary was dismissed on the ground that the analyst's certificate was only *prima facie* evidence of the facts stated in it, and the question whether or not there had been adulteration in the sense of the Act was a question of fact, on which the decision of the sheriff was conclusive. Lord Adam said : ' Section 21 only provides that the certificate shall be *prima facie* proof of every *fact* relevantly set forth by it, and that must be in terms of the schedule to the Act. That schedule draws a clear distinction between matters of fact discovered on analysis of the sample and the opinion of the analyst. These are to be separately set forth, and Section 21 does not say that the production of the certificate shall be proof of any *opinion* which the analyst may be disposed to entertain. The analysis of the milk is a fact relevantly set forth in this certificate ; but when the public analyst goes on to say that the presence of certain percentages of substances led him to the opinion that the milk had been adulterated, that opinion is not a matter of fact as to which the statute says the certificate is, in certain cases, to be sufficient proof, although, no doubt, it is an opinion to which the sheriff would be entitled to give great weight.' A similar decision was given in *Todd* v. *Cochrane* (1901), 3 A., 357 ; 38 S.L.R., 801.

In *Gibson* v. *Fyfe* (1895), 2 S.L.T., case 579, the respondent was charged with selling milk deficient in fat to the extent of 7 per cent. which deficiency was produced, as stated in the certificate, ' by the abstraction of fat or by the addition of skim milk to bring about the same result.' The analyst was examined by the prosecutor, and swore to the accuracy of his certificate. No evidence was led by the accused, and he was convicted. An appeal was dismissed, on the ground that the analyst's certificate was *prima facie* evidence, and, not having been upset, there was sufficient evidence on which to convict.

In *Hewitt* v. *Taylor* (1896), 1 Q.B., 287 ; 74 L.T., 51, the defendant was charged with selling milk which, as the analyst in his certificate (after setting out the constituent parts of the sample) stated, had been adulterated with water. The analyst was not called by the defendant, but he gave evidence on his own behalf. The justices, on the evidence before them, dismissed the

case. On an appeal, it was contended for the prosecutor that the analyst not having been called, the evidence of his certificate was conclusive. The court, however, refused the appeal, holding that the magistrates were right in deciding the case upon the whole evidence before them.

All these cases had reference to analyses of milk. Their value as authorities is modified to some extent by the presumption raised by the Milk Regulations, 1901. Still, the principles which they establish are of general application. The result of them seems to be that, when the analyst's certificate, in the statutory form, is the only evidence before the court, it must be accepted as sufficient evidence of the *facts* relevantly set forth *by* it; but that when there is other evidence, Section 21 is inapplicable, and the court will decide the case on the whole evidence before it.

[4] 'Defendant.' In Scotland 'defender,' and includes respondent (Section 33).

[5] Failure to produce the third-part sample may result in the summons or complaint being dismissed, *Hutchison* v. *Stevenson* (1902), 4 F. (J.), 69; 3 A., 651; and *Suckling* v. *Parker* (1906), 22 T.L.R., 357.

22. Power of Justices to have Articles of Food and Drug Analysed.—The justices[1] before whom any complaint may be made, or the court before whom any appeal may be heard,[2] under this Act may, upon the request of either party, in their discretion cause any article of food or drug to be sent to the Commissioners of Inland Revenue, who shall thereupon direct the chemical officers of their department at Somerset House to make the analysis, and give a certificate to such justices of the result of the analysis; and the expense of such analysis shall be paid by the complainant or the defendant as the justices may by order direct.

[1] In Scotland, sheriff.

[2] See Section 21 of the Act of 1899, which provides that the justices or court referred to in this section shall, on the request of either party, . . . cause an article of food or drug to be sent to the Commissioners of Inland Revenue for analysis, and may, if they think fit, do so without any such request. So that, if the request be made by either party, the court has no option but to send the sample to the Government laboratory for analysis. This is frequently done by the justices and sheriffs. In Scotland there is no reported instance of the High Court having done so.

In *Dargie* v. *Dunbar* (1884), 11 R. (J.), 37, a majority of the judges held that the reference to the Government analyst under this section was merely for the purpose of obtaining an analysis, and that his opinion as to the amount of fat to be found in new milk was inadmissible as evidence. Lord Craighill, who dissented from this opinion, held that, the sheriff on the evidence having convicted, there was no question of law raised by the case, and that the appeal was incompetent. It is difficult to see the use of a reference to the Government analyst, unless the analysis is to be admissible as evidence as to whether or not the article is genuine. The same question can hardly be raised again with regard to milk now that there is a statutory standard for milk.

In another Scotch case—*Fyfe* v. *Hamilton* (1894), 1 A., 484—the High Court of Justiciary held that the Somerset House certificate was not conclusive, there being substantial evidence on the other side. See previous page for fuller note on this case.

23. Appeal to Quarter Sessions.—Any person who has been convicted of any offence punishable by any Act hereby repealed or by this Act by any justices may appeal in England to the next general or quarter sessions of the peace [*which shall be held for the city, county, town, or place wherein such conviction shall have been made, provided that such person enter into a recognizance within three days next after such conviction, with two sufficient sureties, conditioned to try such appeal, and to be forthcoming to abide the judgment and determination of the court at such general or quarter sessions, and to pay such costs as shall be by such court awarded; and the justices before whom such conviction shall be had are hereby empowered and required to take such recognizance; and the court at such general or quarter sessions are hereby required to hear and determine the matter of such appeal, and may award such costs to the party appealing or appealed against as they or he shall think proper*].

In Ireland any person who has been convicted of any offence punishable by this Act may appeal to the next court of quarter sessions to be held in the same division of the county where the conviction shall be made by any justice or justices in any petty sessions district, or to the recorder at his next sessions where the conviction shall be made by the divisional justices in the police district of Dublin metropolis, or to the recorder of any corporate or borough town when the conviction shall be made by any justice or justices in such corporate or borough town (unless when any such sessions shall commence within ten days from the date of any such conviction, in which case, if the appellant sees fit, the appeal may be made to the next succeeding sessions to be held for such division or town), and it shall be lawful for such court of quarter sessions or recorder (as the case may be) to decide such appeal, if made in such form and manner and with such notices as are required by the said Petty Sessions Acts respectively hereinbefore mentioned as to appeals against orders made by justices at petty sessions, and all the provisions of the said Petty Sessions Acts respectively as to making appeals and as to executing the orders made on appeal, or the original orders where the appeals shall not be duly prosecuted, shall also apply to any appeal made under this Act.

This section applies to England and Ireland only. The part printed in italics is repealed by the English Summary Jurisdiction Act, 1884 (47 and 48 Vict., cap. 43, s. 4). See Section 33 (11) as to appeals in Scotland.

24. Proof by Defendant of Exception or Provision.—In any prosecution under this Act, where the fact of an article having been sold in a mixed state has been proved, if the defendant shall desire to rely upon any exception or provision

contained in this Act, it shall be incumbent upon him to prove the same.

The principal exceptions and provisions to which this section applies are those contained in Sections 5, 6 (1) (2), and (4), 8, and 25 of this Act; Section 6 of the Act of 1879, and Section 20 of the Act of 1899. The exceptions do not require to be negatived in the information or complaint. The onus is upon the defendant or respondent to prove that he has the benefit of one or other of them.

25. Defendant to be Discharged if he Prove that he Bought the Article in the Same State as Sold, and with a Warranty.[1] —If the defendant in any prosecution under this Act prove to the satisfaction of the justices or court that he had purchased the article in question as the same in nature, substance, and quality as that demanded of him by the prosecutor, and with a written warranty[2] to the effect, that he had no reason to believe at the time when he sold it that the article was otherwise, and that he sold it in the same state as when he purchased it,[3] he shall be discharged from the prosecution, but shall be liable to pay the costs incurred by the prosecutor,[4] unless he shall have given due notice[5] to him that he will rely on the above defence.

[1] Along with this section, Section 20 of the Act of 1899 should be read. That section provides for a copy of a warranty or invoice intended to be used as a defence being sent to the purchaser within seven days after service of the summons.

The decisions under this section are numerous and conflicting. Certain of the earlier have been expressly overruled; the overruling decisions have in turn been overruled, doubts have been expressed as to the soundness of others, and as to others still regarded as authoritative, the distinctions are so fine as to render them almost useless as a guide to the ordinary layman. They are noted below in chronological order.

[2] In *Rook* v. *Hopley* (1878), 3 Ex. D., 209; 38 L.T., 649, the defendant was charged with selling adulterated lard. In defence, an invoice in the following terms was relied upon: 'Bought by Mr. Hopley, etc., four tins of lard, No. 1, 28 pounds each, at .' The court held that this was not a warranty, but simply a description of what was sold. Pollock (B.) said: 'What is reqüired by the Statute is a writing expressing on the face of it that it is a warranty.' See *Hawkins* v. *Williams*, *infra*, where an invoice was held to contain a warranty.

In *Harris* v. *May* (1883), 12 Q.B.D., 97; 48 J.P., 261, the appellant purchased milk from a farmer under a written contract, by which the farmer agreed to sell to him 86 gallons of 'new and pure milk each and every day for six months, the milk to be delivered twice daily.' The court held that the contract did not contain a written warranty of the milk in question within the meaning of this section. Lord Coleridge, C.J., in giving judgment, said: 'A person seeking to protect himself against the penalty, and wishing to make himself perfectly safe in respect of the sale of a specific article, must show that he had a proper specific warranty in writing in respect of that article from his vendor. The appellant here has not shown that. It is possible that he may have had a parol statement amounting to a warranty from his vendor each morning that the milk was supplied, but that would not be sufficient.'

This judgment was dissented from in *Bacon* v. *Callow Park Dairy Company*, *infra*, but was followed by the majority of the judges in *Watts* v. *Stevens*, *infra*. The judges in that case also dissented from the doctrine laid down in *Elliot* v. *Pilcher* (1901), 2 K.B., 817; 85 L.T., 50, *infra*, that it was held competent to prove by parol evidence that the particular consignment was purchased under the warranty.

In *Farmers and Cleveland Dairy Company* v. *Stevenson* (1890), 63 L.T., 776; 55 J.P., 407, the appellants sold milk from which 20 per cent. of the original fat had been abstracted. They proved that they had purchased the milk under a contract by which the vendor agreed to supply them daily with a certain quantity of 'genuine good milk of the best quality with all its cream on,' and by which each supply was warranted to be pure, genuine, and unadulterated. Attached to each of the cans in which the milk was delivered was a label bearing the words 'Warranted genuine new milk, with all its cream on.' The court held that the contract and label together constituted a warranty of the milk in question within the meaning of this section. See comments upon this case by Cave, J., in *Iorns* v. *Van Tromp*, *infra*.

In *Elder* v. *Smithson* (1893), 57 J.P., 809, the respondent sold lard which was adulterated with 8 per cent. of beef-fat. His defence was that he had bought the lard from the manufacturer in skins which were stamped with the words 'Warranted Pure.' The court held that these words did not constitute a warranty. The ground of the decision was that the warranty was not contained in the contract.

In *Laidlaw* v. *Wilson* (1894), 1 Q.B., 74; 42 W.R., 78, the respondent bought lard from a firm of lard manufacturers under a contract in the following terms: 'We have this day sold to you 3 tons Kilvert's pure lard for delivery to the end of January, 1893.' A parcel of lard was subsequently delivered to the respondent, accompanied by an invoice in which it was described as 'Kilvert's pure bladdered lard.' The respondent sold a portion of this parcel to the appellants. Upon analysis, it turned out to be adulterated. The respondent had sold it *bona fide*, and in the state in which he had bought it. On an information against the respondent under Section 6, the court held that the contract contained a warranty. In delivering judgment, Charles, J., said: 'It is true that the contract does not in terms say that the purity of the lard is warranted, but in my judgment it is not necessary that the word "warranted" should be actually used. To my mind it is enough if the language of the document imports a warranty, and shows an intention on the part of the vendor to warrant. It was, however, said on the part of the appellant that there were two cases which were opposed to that view. The first was *Rook* v. *Hopley'* (*supra*). 'But that case is distinguishable on two grounds. In the first place, the statement there was that the thing sold was lard simply; there was no statement of its purity. And, secondly, the statement there, such as it was, was to be found in an invoice only. But the invoice was no part of the contract, and it is in the contract, and in the contract alone, that the warranty which the statute requires must be sought. I decide the present case upon the construction which is to be put, not upon the invoice of December 23, but on the contract of December 17. The other case relied upon by the appellant was *Harris* v. *May'* (*supra*), 'where it was held that a written contract made on March 24, whereby one F. agreed to deliver to the defendant 86 gallons of pure milk every day for six months, did not constitute a written warranty in respect of a specific can of milk delivered by F. on April 12. There, no doubt, Lord Coleridge, at the commencement of his judgment, said that, in his opinion, the contract relied on by the defendant was not a written warranty within the meaning of the Act.' But on looking at his judgment as a whole, I think that what he really meant was that it was not such a warranty as would cover the specific delivery of milk on April 12, in the absence of some written evidence that that specific

delivery was made under the contract. In the present case there is evidence that the particular parcel of lard was delivered under the contract, the delivery having been accompanied by an invoice which describes the lard in the same terms as those contained in the contract. The invoice, however, is material, not as itself containing a warranty of purity, but as earmarking the particular parcel as having been delivered under a contract in which a written warranty of purity was contained.'

In *Lindsay* v. *Rook* (1894), 10 T.L.R., 643, the defendant purchased from the appellant a pint of malt vinegar, which was supplied from a cask in appellant's shop to which was attached a label bearing the words, 'Vinegar: warranted unadulterated. Grimble and Co. (Limited), Cumberland Market, London.' This vinegar had been invoiced to the appellant as 'Grimble's vinegar.' The vinegar purchased by the appellant was found to be adulterated with 30 per cent. of added water. It was sold by the appellant in the state in which she bought it. On an information charging a contravention of Section 6, it was held by the High Court (quashing a conviction by the justices) that there was a warranty within the meaning of the section. This is the only case in which a label by itself has been held to amount to a warranty, and the soundness of the decision is doubtful. See next case.

In *Iorns* v. *Van Tromp* (1895), 64 L.J.M.C., 171; 72 L.T., 499; 59 J.P., 246, a merchant sold to a grocer ground ginger in canisters, and along with it he received an invoice in which it was described as ground ginger, and each canister bore a printed label 'warranted genuine pure ground ginger.' A portion was sold by the grocer in the state in which he received it, and he had no reason to believe it was not genuine. In a prosecution against the grocer under Section 6, it was held that the invoice and label, together or separately, did not constitute a written warranty within the meaning of this section. Cave (J.) distinguished the case from *Laidlaw* v. *Wilson* (*supra*). 'There,' he said, 'there was a written contract for the delivery of pure lard, and it was held that if the document relied on amounted to a warranty, it was sufficient without the word "warrant" or "warranty" being expressly stated in the document. . . . Here there was no such written contract, and the justices have declined to look at the invoice as throwing light on the question of warranty, and they were perfectly right. Of course, there are some cases in which an invoice or label may be regarded in this way, as in *Farmers', etc., Dairy Company* v. *Stevenson* (*supra*). . . . But there there was a contract warranting the delivery of pure milk for a fixed period. . . . It was not the label which contained the warranty; all it did was to identify the milk. When there is a written warranty in the first instance, then a label such as appears on these canisters of ginger may be regarded, but not otherwise.' Wright, J., said: 'There must be some express individual representation in writing from the seller to the retail dealer, forming part of the contract to sell. . . . The representation . . . must be an essential term in the bargain.'

In *Hawkins* v. *Williams* (1895), 59 J.P., 533, the respondent bought butter from a wholesale merchant, the invoice for which, dated the day of sale, described it as 'Butter: guaranteed pure, average quality,' followed by the initials of the vendor. Some of this butter purchased by the appellant was found to be adulterated. In a prosecution for a contravention of Section 6 it was held, confirming the decision of the justices, that the invoice constituted a written warranty within the meaning of Section 25. The distinction between this case and *Laidlaw* v. *Wilson* (*supra*), where an invoice was held not to constitute a warranty, was that in this case the invoice formed the evidence of the contract of sale, and bore the date of sale, and the guarantee upon it was initialled by the vendor, whereas in *Laidlaw* v. *Wilson* the invoice was dated six days after the purchase. Lord Russell of Killowen, C.J., said: 'An invoice is often used as evidence of the sale itself. Therefore I see no reason why it should not be evidence of a warranty at the time of sale. Here

the natural conclusion from the fact that the invoice bears the date of the day of purchase, and contains the words "guaranteed pure," followed by initials, is that the vendor was giving that document as a written warranty in pursuance of a stipulation by the purchaser for that object.'

In *Robertson* v. *Harris* (1900), 2 Q.B., 117; 82 L.T., 536, which related to a sale of milk, the warranty pleaded was contained in an agreement in writing, by which a farmer agreed to sell to the respondent a certain weekly quantity of milk, 'the milk to be pure new milk.' One of the consignments was found to be adulterated. It was held that, even if this agreement contained a warranty, there was no evidence to show that the particular consignment was purchased under the warranty.

In *Elliot* v. *Pilcher* (1901), 2 K.B., 817; 85 L.T., 50, the defendant entered into a verbal contract with a dairyman for a daily supply of milk. More than two years afterwards the dairyman gave the defendant, at his request, the following warranty in writing: 'We hereby warrant that each and every supply of milk sent by us to you shall be new milk, unadulterated, and with all its cream.' A year after this warranty was given a consignment was found to be deficient in fat. It was held by the High Court (Bigham and Ridley, JJ.) that it was not necessary to show, on the face of the warranty, that it applied to the particular milk sold, but that the connexion between the two could be shown by oral evidence, and that a specific warranty with each delivery of milk was not required. This decision followed *Laidlaw* v. *Wilson*, and overrules *Harris* v. *May*, and *Robertson* v. *Harris* (*supra*), but is in turn overruled by *Watts* v. *Stevens* (*infra*).

In *Bacon* v. *Callow Park Dairy Company, Limited* (1902), 87 L.T., 70; 18 T.L.R., 573, the appellants were prosecuted for selling milk to the respondents from which 40 per cent. of the original fat had been abstracted. The appellants had purchased the milk under a verbal contract. Attached to the churn containing the milk, of which the milk in question was a part, was a label bearing the words, 'Warranted pure new milk, with all its cream. Delivered under contract.' The High Court (Lord Alverstone, C.J., and Darling and Channell, JJ.) held that the defendants were protected by the label, on the ground that there was a contract to give a written warranty with each supply, and that it was not necessary that this contract should be in writing.

In *Irving* v. *Callow Park Dairy Company, Limited* (1902), 87 L.T., 70, the facts were the same as in *Bacon* v. *the same Company*, and the decision was the same. See comments upon this case in *Watts* v. *Stevens* and *Evans* v. *Weatheritt* (*infra*).

In *Wilson* v. *Playle* (1903), 88 L.T., 554; 67 J.P., 263, it was held that the addition to a warranty of the words 'but without accepting any responsibility after delivery' did not render the warranty unavailing as a defence under this section.

In *Watts* v. *Stevens* (1906), 2 K.B., 323; 22 T.L.R., 622, the respondent was charged with a contravention of Section 6 of this Act by selling to the appellant milk containing 16 per cent. of added water. The milk had been supplied by Mott, a milk dealer, under a contract made with the respondent in August, 1905, for fixed periodical deliveries. Mott, on August 5, after making this contract, but before any milk had been delivered, gave the respondent a letter in the following terms: 'I guarantee that the milk supplied by me to Mr. Stevens is perfectly pure, and with all its cream as the cow gives it.—Francis Mott.' Both Mott and the respondent intended this to be a continuing warranty. There was no other warranty. The milk to which the charge related was sold to the complainer on December 25, 1905. The justices held that the letter of August 5 was intended by both parties to cover the milk in question, and was therefore a written warranty within this section, and dismissed the information. On appeal to the High Court

(Alverstone, C.J., and Ridley and Darling, JJ.), the decision was reversed (Ridley, J., dissenting), on the ground that there was no evidence in writing to connect the milk in question with the written warranty, and that in the absence of such evidence the respondent could not rely on the warranty under this section. Mr. Justice Darling, in giving judgment, said : 'Could one gather that this particular can of milk, when it was bought by the respondent, was bought under the warranty — that is, under a contract part of which was collateral to its expressed object ? It was obvious that the contract applied to the whole of the milk to be supplied, and it dealt with milk not then in existence. But it seemed to him that there was not a sufficient connexion in writing between the consignment in question and the warranty. He thought there must be established a connexion between the particular article complained of and the warranty. No doubt the respondent would have had a remedy by action for breach of warranty, but there did not seem to him to be such a connexion as was required by the provisions of Section 25. *Harris* v. *May* (*supra*) supported this view, and so did the *Farmers and Cleveland Dairy Company* v. *Stevenson* (*supra*), especially if the report in the *Justice of the Peace* was looked at, for, obviously, the reason there given was the real one in that case—namely, that the connexion was shown by labels. This part of the judgment was omitted in the *Law Journal* report, but it must have been given, for reporters did not put words into the mouths of judges which they had never uttered. He thought, also, that the cases of *Laidlaw* v. *Wilson* (*supra*) and *Irving* v. *Callow Park Dairy Company* (*supra*) supported his view. It was contended that these cases were wrong, and were overruled by *Elliot* v. *Pilcher* (*supra*). If they had to choose between them, he could not adopt the judgment in the latter case. He would point out also that the judgment of Mr. Justice Ridley in that case was, he would not say *obiter*, but gratuitous. He also thought *Elliot* v. *Pilcher* inconsistent with the latter case of *Irving* v. *Callow Park Dairy Company* (*supra*). But he always liked to give reasons for his judgments, and not to rely entirely on authority. There was no good reason why a man should be allowed to rely upon a warranty given, perhaps, years before, for a consigner would be much more likely to be careless under those circumstances than he would be if each time he sent out a consignment of milk he had to make an affirmation that it was of good quality. This seemed a good reason to him for maintaining the older authorities. He thought that the appeal should be allowed.'

Mr. Justice Ridley said he 'regretted to say that he was of a contrary opinion, as he differed from the judgment of Mr. Justice Darling, and also, he feared, from that of the Lord Chief Justice. Section 25 of the Sale of Food and Drugs Act, 1875, was as follows. (His lordship read the section.) He thought that the circumstances proved before the justices had satisfied the requirements of that section. The section said nothing about a written connexion between the warranty and the consignment. The words in Section 25, "that he had no reason to believe at the time when he sold it that the article was otherwise," were intended to cover a case where a long period of time intervened between the giving of the warranty and a consignment under it. The justices had found that the warranty was intended to be a continuing warranty, and that the milk sold in December was, in fact, sold under that warranty. It appeared certain from the authorities that a warranty meant a statement made at the time of the contract, and that it might cover future deliveries, and also that a purchaser might bring an action for breach of it. The question here was whether the Act of Parliament was satisfied, and there was nothing in it to show that the respondent was required to put himself in a better position than that of getting a warranty upon breach of which he could bring an action. His judgment in *Robertson* v. *Harris* (*supra*) amounted to this — that he thought himself bound by

Harris v. *May*. In *Elliot* v. *Pilcher* he saw that what he had said in *Robertson* v. *Harris* was incorrect, and he concurred in the judgment of Mr. Justice Bigham, and he did so still. He did not think that *Robertson* v. *Harris* could stand with *Laidlaw* v. *Wilson*. As to what he had said in *Elliot* v. *Pilcher*, he did not agree with Mr. Justice Darling that it was *obiter*. It would be a very long *obiter*. What he had said there he had said in no hasty spirit. With regard to the case of the *Farmers and Cleveland Dairy Company* v. *Stevenson*, it was probable that he had not seen the report in the *Justice of the Peace*, which, though a very good journal, as he was informed, was not familiar to him. He had only seen it in the *Law Journal* reports, which were very familiar to him. He, therefore, thought that *Laidlaw* v. *Wilson*, *Farmers, etc., Dairy Company* v. *Stevenson* (subject to the report in the *Justice of the Peace*), and *Elliot* v. *Pilcher* were authorities supporting his judgment, nor did he think that *Irving* v. *Callow Park Dairy Company* was in conflict with it. He thought the appeal should be dismissed.'

In *Evans* v. *Weatheritt* (1907), 2 K.B., 80, the appellant, by a contract in writing, agreed to purchase from a company 'the whole of the milk required for his dairy' for twelve months, from October 1, 1905, and the contract contained a warranty that all milk to be delivered by the company to the appellant should be pure. In June, 1906, milk was delivered to the appellant by the company under the contract, accompanied by a delivery note, which showed that the milk came from the company, but which did not in terms refer to the contract. Some of the milk was sold by the appellant, and was found upon analysis to have had 28 per cent. of milk-fat abstracted from it. On an information against the appellant for having sold the milk contrary to the provisions of Section 6, the appellant relied on the warranty contained in the contract as a defence under this section. The magistrate was of opinion that the delivery note was not a sufficient connexion in writing of the particular consignment with the contract, and that, therefore, on the authority of *Watts* v. *Stevens* (*supra*), there was no warranty covering the particular consignment. He accordingly convicted the appellant. On appeal, it was held that, as the warranty was by the contract expressly applied to all milk sold by the company to the appellant during the specified period, the contract itself was sufficient evidence in writing to connect the particular consignment of milk with the warranty, and that the requirements of Section 25 had been satisfied.

In giving judgment, Lord Alverstone, C.J., said: 'In my opinion, the magistrate has erred in this case by attaching too much importance to the fact that this particular consignment of milk was accompanied by a delivery order which identified it as coming from the Great Western and Metropolitan Dairies, Limited, and he appears to have thought that the court intended to lay down in *Watts* v. *Stevens* that the written connexion between a particular consignment of milk and a previous warranty could only be proved by the production of a delivery order containing some statement which connected the particular consignment with the warranty. The case turns on Section 25 of the Sale of Food and Drugs Act, 1875. I do not intend to go through all the decisions which have been given on this section. They were very fully considered in *Watts* v. *Stevens*, and I accept, as I am bound to do, the law as I endeavoured to lay it down in that case; but when the judgments of Darling, J., and myself in that case are considered as affecting the question whether in this case there was any evidence in writing of a connexion between this consignment of milk and the warranty, it will be found that there is nothing in those judgments conflicting with the view which I am about to express.' His lordship, after quoting from his own and Mr. Justice Darling's judgments in *Watts* v. *Stevens*, went on to point out that the warranty referred to in Section 25 did not, in his opinion, point merely to a general right of action, but to a specific contract applicable to the goods in question, and continued: 'That is the test which I intended to lay down, but I did not say, and I did not mean, that that special

contract could only be proved by a written paper attached to each can of milk. Later on in the same judgment I pointed out that I dissented from *Elliot* v. *Pilcher*, as I still do, in so far as it decided that no writing was necessary to connect the particular consignment with the warranty, and when considering the case of *Harris* v. *May*, I quoted from my judgment in *Irving* v. *Callow Park Dairy Company*, where I am reported to have said: "Having regard to more recent cases, I doubt whether *Harris* v. *May* can be regarded as law. If it was meant to lay down any general principle, it has certainly been qualified by later cases." What I meant was that the construction which had been placed on *Harris* v. *May* in some of the later cases cannot be supported. That that was clearly my meaning appears from the passage at the end of my judgment in *Watts* v. *Stevens*, where I point out that when it is remembered that my observations in *Irving* v. *Callow Park Dairy Company* were made "in reference to a memorandum or label which was on each churn, I do not think that it can be used in support of the view that there need be no writing connecting the warranty with a particular consignment of goods." The case of *Watts* v. *Stevens* was decided after a full consideration of all the authorities, and it was held that there must be some writing connecting the particular consignment with the warranty, and that a mere general statement by the vendor that he warranted all the milk supplied by him to the purchaser was not sufficient. Applying that principle to the facts of the present case, it is not suggested that the appellant received milk from anyone but the Great Western and Metropolitan Dairies, Limited; he proved the receipt of this particular consignment from that company, and he produced the contract of October 2, 1905, which showed that all his milk came from that company's dairy. In my judgment that document is in these circumstances sufficient on its face to show the requisite written connexion between the consignment of milk and the warranty contained in the contract. In my opinion, the magistrate fell into error in thinking that that written connexion could only be proved in one particular way; but having regard to the terms of the contract, I am of opinion that there is in this case a writing connecting this milk with the warranty in the contract, and this appeal must therefore be allowed.'

The points established by the decisions seem to be these:

(1) That a warranty to be effectual as a defence under this section must be in writing, and must be given at the time the contract of sale (which may be verbal) is entered into, and form part of it; or, if not given at the time, the contract must contain an obligation by the vendor to give a written warranty.

(2) It is not necessary that express words of warranty be used, provided the contract shows an intention on the part of the vendor to warrant; and

(3) The accused must prove that the particular article in respect of which the warranty is put forward was purchased under the warranty, and he can only do so in writing.

[3] In *Hotchin* v. *Hindmarsh* (1891), 2 Q.B., 181; 65 L.T., 149, it was held that, even if there was a warranty under this section, it would not avail as a defence in the absence of evidence to show that the respondent sold the article in the same state as when he purchased it, and that he had no reason to believe that its quality was otherwise than as demanded of him. In this case it was also held that a servant prosecuted as the seller could not found, in defence, upon a warranty given to his master.

But see the Act of 1899, Section 20 (4), which entitles a servant prosecuted to plead a warranty given to his master. See *Sanders* v. *Sadler*, referred to in note 3 to Section 3 of Act of 1879 (*post*, p. 297).

In *Jones* v. *Bertram* (1894), 58 J.P., 116, the magistrate found that the respondent, who was prosecuted for selling adulterated milk, was protected by a warranty. He found that the respondent had no reason to believe

that the milk was not pure; but he had not found that the milk had been sold in the same state as when respondent received it, and the case was remitted to the magistrate to find on that point.

In *Hennen* v. *Long* (1904), 90 L.T., 387; 68 J.P., 237, the defendant was prosecuted for a contravention of Section 6 by selling milk deficient in fat to the extent of 3 per cent., and mixed with water to the extent of 5·2 per cent., and containing boric acid as a preservative. Defendant admitted adding an ounce of boric acid to each gallon of milk. Held that a warranty was no defence under this section, as, although the adulteration charged was not the preservative added, the defendant had not sold the milk in the same state as when he purchased it.

[4] In *MacKirdy* v. *McKendrick* (1897), 25 R. (J.), 49; 5 S.L.T. 254, it was held by Lord Kincairney that the Act did not, in its application to Scotland, expressly or by implication authorize a claim for expenses except in the special case mentioned in this section.

[5] See Act of 1899, Section 20 (v.), which provides for a copy of the warranty to be relied on being sent to the prosecutor within seven days after service of the summons.

26. Application of Penalties.—Every penalty imposed and recovered under this Act shall be paid in the case of a prosecution by any officer, inspector, or constable of the authority who shall have appointed an analyst or agreed to the acting of an analyst within their district, to such officer, inspector, or constable, and shall be by him paid to the authority for whom he acts, and be applied towards the expenses of executing this Act, any statute to the contrary notwithstanding; but in the case of any other prosecution the same shall be paid and applied in England according to the law regulating the application of penalties for offences punishable in a summary manner, and in Ireland in the manner directed by the Fines Act (Ireland), 1851, and the Acts amending the same.

This section applies to England and Ireland. See Section 33 (9) as to Scotland.

27. Forging Certificate or Warranty—Wilful Misapplication of Warranty—False Label.—Any person who shall forge, or shall utter, knowing it to be forged,[1] for the purposes of this Act, any certificate or any writing purporting to contain a warranty, shall be guilty of a misdemeanour and be punishable on conviction by imprisonment for a term of not exceeding two years with hard labour;

Every person who shall wilfully apply to an article of food, or a drug, in any proceedings under this Act, a certificate or warranty given in relation to any other article or drug, shall be guilty of an offence under this Act, and be liable to a penalty not exceeding twenty pounds;[2]

[*Every person who shall give a false warranty in writing to any purchaser in respect of an article of food or a drug sold by him as*

principal or agent, shall be guilty of an offence under this Act, and be liable to a penalty not exceeding twenty pounds ;][3]

And every person who shall wilfully give a label with any article sold by him which shall falsely describe the article sold, shall be guilty of an offence under this Act, and be liable to a penalty not exceeding twenty pounds.[4]

[1] In *Derbyshire* v. *Houliston* (1897), 1 Q.B., 772; 76 L.T., 624, it was held that knowledge on the part of the accused that the warranty was false must be proved to entitle a prosecutor to obtain a conviction under this section; but this has been altered by Section 20 (6) of the Act of 1899, which provides that the accused falls to be convicted unless he proves that he had reason to believe that the statements or descriptions contained in the warranty were true. The onus of proof will rest upon the accused (Section 24 of this Act).

In *Reg.* v. *Smith* (1896), 1 Q.B., 596; 74 L.T., 348, the defendant was charged under this section at the Clerkenwell Police Court with giving a false warranty in writing with respect to milk sold and delivered by him to a dairy company. The sale, delivery, and giving of the warranty had all taken place outside the jurisdiction of the Clerkenwell Police Court, but the inspector had, with a view to a prosecution of the dairy company under Section 6, obtained a sample of the milk in the course of its delivery to a purchaser from them within the jurisdiction of the court, and had submitted the sample to the public analyst of the district, who certified that it contained a certain percentage of added water. It was held that a Metropolitan police court sitting at the Clerkenwell Police Court had no jurisdiction to hear and determine the information against the defendant. An opinion was also expressed by Hawkins that, even if the proceedings had been brought in the proper court, the certificate of an analyst of a district outside the jurisdiction, with a view to the prosecution of the dairy company, could not be used as evidence against the defendants for giving a false warranty.

In consequence of this decision Section 20 (5) of the Act of 1899, was passed, which provides that prosecutions under this section may be brought before a court having jurisdiction in the place where the article of food or drug to which the warranty relates was purchased, or before the court having jurisdiction in the place where the warranty was given.

[2] See Section 17 of the Act of 1899, which provides that the penalty may be increased to £50 in a second and £100 in any subsequent conviction.

[3] The words in square brackets are repealed by Section 27 and Schedule of the Act of 1899; but Section 20 (6) of that Act contains more stringent provisions for protecting the public against the giving of false warranties as to articles of food or drugs.

[4] Costs cannot be awarded to the successful parties in Scotland in prosecutions under the Sale of Food and Drugs Acts (*MacKirdy* v. *McKendrick*, *supra*, p. 279).

28. Proceedings by Indictment and Contracts not to be Affected.—Nothing in this Act contained shall affect the power of proceeding by indictment, or take away any other remedy against any offender under this Act, or in any way interfere with contracts and bargains between individuals, and the rights and remedies belonging thereto.

Provided that in any action brought by any person for a breach of contract on the sale of any article of food or of any drug, such person may recover alone or in addition to any other damages recoverable by him the amount of any penalty in which he may have been convicted under this Act, together with the costs paid by him upon such conviction, and those incurred by him in and about his defence thereto, if he prove that the article or drug, the subject of such conviction, was sold to him as and for an article or drug of the same nature, substance, and quality as that which was demanded of him, and that he purchased it not knowing it to be otherwise, and afterwards sold it in the same state in which he purchased it; the defendant in such action being nevertheless at liberty to prove that the conviction was wrongful, or that the amount of costs awarded or claimed was unreasonable.

29. Expenses of Executing Act.—The expenses of executing this Act shall be borne, in the City of London and the liberties thereof, by the consolidated rates raised by the Commissioners of Sewers of the City of London and the liberties thereof, and in the rest of the metropolis by any rates or funds applicable to the purposes of the Act for the better local management of the metropolis, and otherwise as regards England, in counties by the county rate, and in boroughs by the borough fund or rate ;

And as regards Ireland, in counties by the grand jury cess, and in boroughs by the borough fund or rate ; all such expenses payable in any county out of grand jury cess shall be paid by the treasurer of such county ; and

The grand jury of any such county shall, at any assizes at which it is proved that any such expenses have been incurred or paid without previous application to presentment sessions, present to be raised off and paid by such county the moneys required to defray the same.

This section applies to England and Ireland. See Section 33 (7) as to expenses of executing the Act in Scotland.

30. Tea to be Examined by the Customs on Importation.—From and after the first day of January, one thousand eight hundred and seventy-six, all tea imported as merchandise into and landed at any port in Great Britain or Ireland shall be subject to examination by persons to be appointed by the Commissioners of Customs, subject to the approval of the Treasury, for the inspection and analysis thereof, for which purpose samples may, when deemed necessary by such inspectors, be taken and with all convenient speed be examined by the analysts to be so appointed ; and if upon such analysis the same shall be found to be mixed with other

substances or exhausted tea, the same shall not be delivered unless with the sanction of the said Commissioners, and on such terms and conditions as they shall see fit to direct, either for home consumption or for use as ships' stores or for exportation; but if on such inspection and analysis it shall appear that such tea is in the opinion of the analyst unfit for human food, the same shall be forfeited and destroyed or otherwise disposed of in such manner as the said Commissioners may direct.

31. Definition of 'Exhausted Tea.'—Tea to which the term 'exhausted' is applied in this Act shall mean and include any tea which has been deprived of its proper quality, strength, or virtue by steeping, infusion, decoction, or other means.

32. Provision for the Liberty of a Cinque Port.—For the purposes of this Act every liberty of a cinque port not comprised within the jurisdiction of a borough shall be part of the county in which it is situated, and subject to the jurisdiction of the justices of such county.

33. Application of the Act to Scotland.—In the application of this Act to Scotland the following provisions shall have effect:

(1) The term 'misdemeanour' shall mean 'a crime or offence.'
(2) The term 'defendant' shall mean 'defender' and include 'respondent.'
(3) The term 'information' shall include 'complaint.'
(4) This Act shall be read and construed as if for the term 'justices,' wherever it occurs therein, the term 'sheriff' were substituted.
(5) The term 'sheriff' shall include 'sheriff substitute.'
(6) The term 'borough' shall mean any royal burgh and any burgh returning or contributing to return a member to Parliament.
(7) The expenses of executing this Act shall be borne in Scotland in counties by the county general assessment, and in burghs by the police assessment.[1]
(8) This Act shall be read and construed as if for the expression 'the Local Government Board,' wherever it occurs therein, the expression 'one of Her Majesty's principal Secretaries of State' were substituted.[2]
(9) All penalties provided by this Act to be recovered in a summary manner shall be recovered before the sheriff of the county in the sheriff court, or at the option of the person seeking to recover the same in the police court, in any place where a sheriff officiates as a

police magistrate under the provisions of the Summary Procedure Act, 1864,[3] or of the Police Act in force for the time in any place in which a sheriff officiates as aforesaid, and all the jurisdiction, powers, and authorities necessary for this purpose are hereby conferred on sheriffs.[4]

Every such penalty may be recovered at the instance of the procurator fiscal of the jurisdiction,[5] or of the person who caused the analysis to be made[6] from which it appeared that an offence had been committed against some one of the provisions of this Act:[7]

Every penalty imposed and recovered under this Act shall be paid to the clerk of court, and by him shall be accounted for and paid to the treasurer of the county general assessment or the police assessment of the burgh, as the sheriff shall direct.

(10) *Every penalty imposed by this Act may be reduced or mitigated according to the judgment of the sheriff.*[8]

(11) It shall be competent to any person aggrieved by any conviction by a sheriff in any summary proceeding under this Act to appeal against the same [*to the next circuit court, or where there are no circuit courts*] to the High Court of Justiciary [*at Edinburgh*], in the manner prescribed by such of the provisions of the Act of the twentieth year of the reign of King George the Second, chapter forty-three, and any Acts amending the same, as relate to appeals in matters criminal, and by and under the rules, limitations, conditions, and restrictions contained in the said provisions.[9]

[1] Section 3, (3) and (4), of the Act of 1899 provides for expenses incurred by the Local Government Board in executing the Act in default of a local authority being treated as expenses incurred by the local authority.

[2] Section 23 of the Act of 1899 provides for the supervision of the Act being transferred from the Secretary for Scotland to the Local Government Board.

[3] Section 18 of the Summary Procedure Act, 1884, as modified and supplemented by Sections 6 and 8 of the Summary Jurisdiction Act, 1881, contains provisions for recovery of penalties for contravention of Statutes in cases where the Act creating the offence makes provision for recovery of the penalty, in cases where no such provision is made, in cases where in default of payment the Act authorizes imprisonment, and in cases where imprisonment is not authorized but is not excluded. In Schedule K., annexed to the Act, forms of conviction are given, applicable to the nature and circumstances of the various complaints figured in Section 18. Great care must be exercised in selecting the appropriate form. The Sale of Food and Drugs Acts make no special provision for recovery of penalties, and there is no provision for imprisonment in default of payment, but recovery by imprisonment is not

excluded. Therefore, as provided in Subsection 6 of Section 18, the appropriate form is the first part of Form No. 6 of Schedule K. The complaint, after specifying the pecuniary penalty, will set forth that the accused in default of payment is liable to execution by poinding and sale and imprisonment in terms of Section 18 of the Summary Procedure (Scotland) Act, 1864, but subject to the provisions of the Summary Jurisdiction (Scotland) Act, 1881, and of the Fine or Imprisonment (Scotland and Ireland) Act, 1899.

In *MacKirdy* v. *McKendrick* (1897), 25 R. (J.), 49; 2 A., 435, the complaint set forth that the accused was liable to a penalty of £20 for each of two offences charged, and, in default of payment with expenses, to execution by arrestment, poinding and sale and imprisonment in terms of Section 18 of the Summary Jurisdiction (Scotland) Act, 1864. The Sheriff-Substitute dismissed the complaint on the ground that the alternative of imprisonment craved was not competent. It was held on appeal that imprisonment not being excluded by the terms of this Act, the statement in the complaint as to imprisonment was competent in terms of Section 18 (6) of the Summary Procedure Act of 1864. Lord Kincairney said: 'I am of opinion that Section 18 of the Summary Procedure Act authorizes imprisonment in all cases unless where recovery by imprisonment is excluded by the terms of the Act contravened. The part of Section 18 which is applicable to the present case is Subsection 6.' On the question of expenses, which was also raised in the appeal, his lordship said: 'I do not think that a claim for expenses is authorized by the Sale of Food and Drugs Act expressly or by implication except in the special case mentioned in Section 25.' His lordship held that the statement in the complaint as to the accused's liability for expenses was erroneous, but that it was a mistake which might have been corrected by the Sheriff-Substitute, and therefore did not necessitate the dismissal of the complaint.

It must be carefully noted, however, that, since the Acts do not expressly authorize imprisonment, Subsection 6 and the form in Schedule K., applicable to the circumstances, do not authorize the court, in convicting persons accused of offences under the Act, to grant warrant in the sentences for imprisonment for a specified period on failure to pay the penalty. No warrant for imprisonment can be granted 'until' (as Subsection 6 expressly states) 'after the period allowed for execution by arresting or poinding, except in the special case mentioned in said Form No. 6.' The special case excepted is provided for by the following directory words incorporated within brackets in the form: 'If at the hearing it shall appear that poinding and sale would be inexpedient, then, in place of the warrant annexed to the judgment of the preceding form' (that is, ordaining instant execution by arrestment, and also execution by poinding and sale—and imprisonment where there is power to imprison), 'say: and then the sentence will order instant execution by imprisonment, and the detention of the accused for a specified period, unless the expenses and penalties shall be sooner paid.' The special cases covered by the words above quoted do not include prosecutions under these Acts, because a note appended to this part of the form says, 'This form only to be used where the Acts founded on authorize imprisonment for a specified period,' and, as already pointed out, the Acts do not so authorize. Therefore, under the warrant which will be contained in all such judgments under these Acts for execution by arrestment and poinding and sale, a warrant for imprisonment will not be included, and can only be granted upon the officer reporting that the sums mentioned in the judgment have not been recovered in whole or in part. The sheriff or other judge will then, and only then, grant warrant for imprisonment for a specified period not exceeding three months (Section 8 of Summary Jurisdiction Act, 1881).

The case of *Todd* v. *Magowan*, 7 F. (J.), 50, shows the necessity for carefully specifying in the complaint the execution to which the accused is liable in default of payment of the penalty, and also for carefully selecting the appro-

priate form of conviction. The opinion of the Lord Justice-General (Dunedin) contains a careful and luminous exposition of Section 18 (6) of the Summary Procedure Act, 1864, and relative schedule and forms, and should be carefully studied by prosecutors.

Reference may also be made to the important case of *Simpson* v. *The Board of Trade* (1892), 19 R. (J.), 66. In that case the Board of Trade prosecuted the respondent in the Sheriff Court of Greenock for a contravention of the Merchant Shipping Act, 1854, which authorized recovery of penalties by arresting, poinding, and imprisonment in default of payment. The Sheriff convicted, and ordained instant execution by imprisonment. The conviction failed to set forth that it was inexpedient to issue a warrant of poinding and sale. On this ground, among others, the court quashed the conviction.

In *Gardner* v. *Bremridge* (1901), 3 F. (J.), 46, the respondent was charged in a prosecution in the Sheriff Court at Linlithgow for a contravention of the Pharmacy Act, which provided for penalties being recovered by poinding. The Sheriff-Substitute fined the respondent a modified penalty of £2, with £1 2s. of expenses, and in default of immediate payment thereof granted warrant for recovery by poinding and sale on the expiration of forty-eight hours, without further notice or warrant, and appointed a return or execution of the poinding and sale within eight days under certification of imprisonment for the period of three days in default of payment. The respondent brought a suspension of the sentence on the ground that imprisonment (which the sentence authorized) was, under the Pharmacy Acts, not only not expressly authorized, but was excluded by implication, and, alternatively, that it did not as a preliminary require execution by arrestment as well as by poinding. The Court (Lord Justice-General—Lord Blair Balfour—and Lords Kyllachy and Low) refused the suspension, holding that imprisonment, not being excluded by the Pharmacy Acts, was competent, that the Pharmacy Act, 1852, Section 12, authorized poinding, and that the case was covered by the latter part of Subsection 6 of Section 18 of the Act of 1864, providing for recovery by 'arrestment, poinding, and sale and imprisonment, or by any combination of those forms of diligence,' and by Section 8 of the Summary Jurisdiction Act, 1881, which provides that 'where a warrant of poinding and sale is competent, a warrant of imprisonment in default of recovery of sufficient goods shall likewise be competent for a period not exceeding three months, and the Court shall specify the terms of imprisonment in the warrant.' It was held that it was not necessary that the warrant of imprisonment should also be in default of recovery by arrestment.

It need hardly be said that the certification of imprisonment in default of payment or recovery of the penalty which is usually inserted in sentences under these Acts is not a warrant to imprison, and that it is only in default of recovery of the penalty under a warrant to arrest and poind that a warrant to imprison can be got from the judge who tried the case in accordance with the form given in Schedule K6 of the Act of 1864.

It is satisfactory to note that the Criminal Procedure and Summary Jurisdiction (Scotland) Bill now before Parliament greatly simplifies the procedure for recovery of penalties in default of payment, and enacts a new and more equitable scale of imprisonment for non-payment of fines and penalties. If the Bill as framed becomes law, most of what is contained in this note will become obsolete.

[4] The Burgh Police (Scotland) Act, 1892, Section 432, provides that the commissioners (now town councillors) are to be the local authority under the Sale of Food and Drugs Act, and that offences under the Act *may* be prosecuted as police offences under complaint by the Burgh Prosecutor.

The sheriff and police magistrates thus have concurrent jurisdiction to try offences under the Acts.

[5] A Procurator-Fiscal may delegate his duty to a duly appointed deputy. In *Thomson* v. *Scott* (1901), 3 F. (J.), p. 79, which was a prosecution against a parent for failure to provide education for his children under the Education (Scotland) Acts, the school board, in virtue of powers conferred by Section 70 of the Education (Scotland) Act, 1872, appointed a person, who happened to be the Procurator-Fiscal of the county, to prosecute parents for failing to provide education for their children. At the hearing of the complaint the prosecutor did not appear, but sent his clerk, who was duly appointed Deputy Fiscal, to conduct the proceedings. In a suspension of the conviction the High Court of Justiciary held that the officer appointed by the board to prosecute had no power to delegate his duty, and that, although he happened to be Procurator-Fiscal of the county, he did not prosecute in that capacity, but as the person appointed by the Board.

[6] The question whether a complainer (other than a Procurator-Fiscal or Burgh Prosecutor) prosecuting for the public interest for contraventions of an Act of Parliament is a public or a private prosecutor, and whether he can instruct a law agent to prepare and sign complaints and conduct prosecutions in court on his behalf, has recently been frequently before the High Court of Justiciary in various forms. The answer to this question depends on the terms of the enactment authorizing the prosecution construed along with Subsection 1 of Section 9 of the Summary Jurisdiction (Scotland) Act, 1881, which is as follows : ' Every complaint at the instance of a private prosecutor or complainer under the Summary Jurisdiction Acts may be signed either by such private prosecutor or complainer, or by a duly qualified law agent on his behalf, and such law agent may, in the absence of the private prosecutor or complainer, appear in court and conduct the proceedings on his behalf.' In construing this section, Section 22 of the Summary Procedure Act of 1864 has to be kept in view. That section provides ' that expenses shall not be awarded to or against any public prosecutor, or party prosecuting under the authority of any Act of Parliament for the public interest, unless such award of expenses is authorized by such Act.' This provision would seem to show that the public prosecutor and a person prosecuting for the public interest under the authority of an Act of Parliament are not synonymous.

The question, in a limited form, was first raised in *Finlayson* v. *Bunbury* (1898), 25 R. (J.), 110, which was a complaint at the instance of an assessor under the Lands Valuation Acts (who, being a private prosecutor, sued with concurrence of the Procurator-Fiscal), charging the respondent with a contravention of Section 7 of the Act. The complaint was signed by the prosecutor, but at the trial a duly qualified law agent appeared in court and conducted the prosecution on his behalf. The court held on appeal that this was competent, and that the words, ' such agent ' in Section 9 of the Summary Jurisdiction Act of 1881 meant, not an agent who had signed the complaint, but ' such qualified agent as before described ' in the section—in other words, any qualified law agent.

In *McMurdo* v. *McCracken* (1907), S.C. (J.), 1, the respondent was prosecuted under the Education (Scotland) Acts for failing to provide sufficient education for his child. The complainer was a solicitor duly appointed by the school board of the parish of New Monkland to prosecute such cases in virtue of powers conferred by Section 70 of the Scotch Education Act, 1872. At the diet for the hearing of the complaint the complainer was present. The respondent also appeared and pleaded not guilty, and the case was adjourned for trial. At the adjourned diet the complainer was absent, but a qualified law agent appeared and conducted the prosecution for him. After evidence had been led, it was maintained for the respondent that the complainer's absence vitiated the proceedings. The Sheriff-Substitute sustained this objection, basing his decision on *Thomson* v. *Scott* (1901), 3 F. (J.), 79, and dismissed the com-

plaint. The complainer appealed to the High Court of Justiciary. The court (the Lord Justice-Clerk, Lord Stormonth-Darling, and Lord Low) affirmed the sheriff's decision. The Lord Justice-Clerk said : 'It seems to me to be quite clear that in no aspect in which the case can be viewed can the appellant succeed. It is admitted that the prosecutor in this case was entitled to prosecute. It is said that he was a private prosecutor. If he was a private prosecutor he had no right to prosecute without the concurrence of the Procurator-Fiscal. But, I think, he was not a private prosecutor. He had nothing to complain of in so far as regarded himself ; he was solely representing a public body which has the right to prosecute in certain cases. Under the statute by which they have that right they can either send the case to the Procurator-Fiscal or to some person duly qualified to act as prosecutor. The person whom the school board entrusted with the duty of prosecuting had no authority from the school board to delegate his duties to anyone ; but, even if he had had the authority of the school board to delegate his duties, I do not think it would have been competent for the school board to authorize that. He could only prosecute under his appointment, and nobody could prosecute who had not an appointment. It, therefore, seems perfectly clear that this proceeding was not conducted in such a way as would entitle the sheriff to convict, and that he was right in dismissing the complaint.'

It was thus expressly decided in that case that the person appointed to prosecute such cases was not a private prosecutor, but it was not said in so many words that he was a public prosecutor, yet, in effect, it was held that he was. As the Lord Justice-Clerk said, he was solely representing a public body which has the right to prosecute in certain cases. The true ratio of the decision seems to be that the prosecutor, being himself a delegate, had no power to delegate his authority. Shortly after the decision in *McMurdo* v. *McCracken*, in a prosecution under the Sale of Food and Drugs Acts before Sheriff-Substitute Shennan at Kirkcaldy, an objection was taken to the competency of the complaint on the ground that it was signed by a law agent on behalf of the prosecutor—a sanitary inspector —and objection was also taken to the law agent appearing in court and conducting the prosecution on his behalf. The Sheriff-Substitute sustained both objections, holding that the prosecutor must sign the complaint and appear in court and personally conduct the prosecution. No appeal was taken against this decision.

Shortly afterwards the same questions came before the High Court of Justiciary in the case of *Wilson* v. *McLaughlin* (1907), S.C. (J.), 61. In that case the respondent was charged in the Sheriff Court at Airdrie with two offences under the Sale of Food and Drugs Acts. At the trial of the case the complainer—the Medical Officer of Health for the county of Lanark—was not personally present in court, but was represented by a law agent, who conducted the prosecution on his behalf. In defence, numerous objections were stated, including an objection that the complainer could not be represented by a law agent. This objection was sustained by the sheriff. On an appeal by the complainer to the High Court of Justiciary, the decision was reversed on this point, on the ground that the complainer was a private prosecutor within the meaning of Section 9 of the Summary Jurisdiction Act, 1881, and was therefore entitled to be represented by a law agent at the hearing. Lord Ardwall, who gave the leading judgment, with regard to this objection, said : 'I read it as being aimed at not merely the physical absence of the prosecutor, but at the fact that he did not personally conduct the case for the prosecution himself—in other words, what the respondent maintains is that, not only was the complainer bound to have been present in court when the complaint came on for trial, but ought to have conducted the prosecution himself. Now, the Summary Jurisdiction

Act, 1881, Section 9 (1), provides that " every complaint at the instance of a private prosecutor or complainer under the Summary Jurisdiction Acts may be signed either by such private prosecutor or complainer, or by a duly qualified law agent on his behalf, and such law agent may, in the absence of the private prosecutor or complainer, appear in court and conduct the prosecution on his behalf." The question, accordingly, is, Does this complainer answer the description of a private prosecutor ? He must either be a public or a private prosecutor : there are only the two classes. Now, the public prosecutors are the Lord Advocate and his deputies, and the Procurator-Fiscals and their deputies, and also such persons as are specially appointed, in virtue of the provisions of such Acts of Parliament as the Burgh Police Acts, to prosecute in the public interest in the burgh courts. Every other prosecutor should be regarded as a private prosecutor in the sense of this provision. So much is that the case that in Acts which provide penalties for breaches of their provisions, and in which no power is given to officials of the bodies whose duty it is to enforce these Acts, such as the Pharmacy Acts, to institute proceedings at their own instance, the officials under these Acts have to obtain the concurrence of the Procurator-Fiscal, like ordinary private prosecutors. That is not necessary under the Sale of Food and Drugs Acts, which we are dealing with in the present case, because special power is given to any purchaser of an adulterated sample to institute these proceedings. That is made clear by the provisions of Section 33 (9). I have, therefore, no hesitation in saying that the persons who are authorized to institute proceedings, whether a purchaser under Section 12 or an official under Section 13, are entitled to prosecute complaints such as the present, as private prosecutors, at their own instance, without concurrence of the Procurator-Fiscal or other public prosecutor, and to conduct their prosecution in court in the same manner as any other member of the public by means of a duly qualified law agent. I am of opinion that this view of the statutes derives support from what may be termed considerations of common sense ; for while medical officers of health, inspectors of nuisances, or inspectors of weights and measures, or inspectors of meat markets, or police constables, may be very suitable persons for procuring adulterated articles to be analyzed, they might in many instances be very unsuitable persons for conducting a case in court, and it is in the public interest that, where they think it advisable, such persons should be entitled to employ a qualified law agent to conduct prosecutions. I may add that the present case is quite different from the case of *Thomson* v. *Scott* (3 Adam, 410) and other cases of officers appointed under the Education Act. That Act gives power to school boards to appoint any person they choose to conduct prosecutions at their instance—they may appoint a law agent, or any one whom they please ; but it was held in these cases that the person so appointed by them to conduct a prosecution was not entitled to delegate his duties to some one else. In *Thomson's* case the Procurator-Fiscal was appointed to conduct the prosecution, and it was held that he could not delegate that duty to his deputy, because, although the deputy was entitled to act for the Procurator-Fiscal in his ordinary work, yet he had no mandate, express or implied, from the school board to appear for them, and that the maxim *delegatus non potest delegare* applied to such a case.'

Lord Dundas concurred in this opinion, and Lord Mackenzie stated that, with regard to this objection, he did not dissent.

In prosecutions in the Glasgow Sheriff Court, reported in the *Glasgow Herald* of October 9 and 11, 1907, by George Whyte, residing in Cheshire, acting, it is said, on the instructions of the Irish Department of Agriculture, against several provision dealers in Glasgow for a contravention of Section 6 of the Act of 1875 by their selling Irish butter which contained a large percentage of fat foreign to milk, objection was taken to the competency of the

complaints on the ground that the prosecutor was a private prosecutor, and had failed to obtain the consent of the Procurator-Fiscal. Sheriff-Substitute Mackenzie, in accordance with Lord Ardwall's opinion in *Wilson* v. *McLaughlin*, repelled the objection, holding that the complainer, being a purchaser who had caused the analysis to be made within the meaning of Section 12 and this subsection, was entitled to prosecute without the concurrence of the Procurator-Fiscal.

In the case of *Motion* v. *McGinnes* (1907), S.C. (J.), 105 ; 15 S.L.T., 276, which was a prosecution at the instance of an inspector of poor against a man for neglecting to maintain his wife and child—for a contravention of the Poor Law Act of 1845—the prosecutor was not present in court, but was represented by a law agent, who appeared to conduct the proceedings for him. An objection to his appearing, taken on behalf of the respondent, was sustained by the sheriff, and the complaint dismissed as incompetent in the absence of the inspector of poor. An appeal to the High Court of Justiciary was sustained, on the ground that the prosecutor was a private prosecutor within the meaning of Section 9 of the Summary Procedure Act, 1881. The Lord Justice-Clerk, in giving judgment, said : 'I have no doubt that the Sheriff-Substitute is wrong. . . . If it had been the fact that the Prosecutor here was a public prosecutor I must say that I should have had very great difficulty in following Mr. Clyde's argument that the personal presence of the prosecutor was not necessary, provided he was represented by a qualified law agent. But I do not think that we have to determine any question of that sort here, because I am satisfied that this prosecutor is not a public prosecutor in the sense in which that expression is understood in our law. This is a case of a prosecution for the purpose of preventing what is not in any proper sense a crime, but is simply a *malum prohibitum*. It is just a prosecution under the Summary Procedure Acts. I entirely concur in the views expressed by Lord Ardwall in the case of *Wilson* v. *McLaughlin* as to the distinction as to public prosecutors and private prosecutors, and I also entirely concur in what Lord Ardwall there said in regard to the decisions under the Education Acts. It seems to me that these decisions were absolutely right, because the Act there expressly enacted that the Procurator-Fiscal or other person appointed by the school board "shall prosecute," and it was held that the person so appointed had no power to delegate his duties to anyone else in accordance with the rule *delegatus non potest delegare*. There is no question of that sort here. The prosecutor here is not appointed to prosecute by anybody. It is simply a prosecution at the instance of an inspector of poor, and such an officer is not a public prosecutor. Under Section 9 of the Summary Jurisdiction Act, 1881, therefore, he was entitled to be represented by a duly qualified law agent. I think, therefore, that the complaint should be sent back to the sheriff to proceed.' Lord Stormonth-Darling and Lord Ardwall concurred.

In the *Duke of Sutherland* v. *Douglas* (1907), S.C. (J.), 107, 15 S.L.T., 327, which was a complaint by a private complainer with concurrence of the Procurator-Fiscal charging the respondent with a contravention of the Poaching Act, the complaint was signed by a duly qualified law agent on behalf of the complainer. At the diet of compearance the complainer and his agent who had signed the complaint were absent, and, in consequence, the diet was adjourned for a week. At the adjourned diet the respondent was present with his agent, but both the complainer and his agent who had signed the complaint were again absent. The latter, however, had sent his clerk, who was a qualified law agent, to conduct the prosecution. To this objection was taken on behalf of the respondent, the point of the objection being that where a complaint was signed by a law agent on behalf of a private prosecutor, only that law agent, and no other, could appear in court and conduct the prosecution. The Sheriff-Substitute sustained the objection and dismissed the complaint.

An appeal to the High Court of Justiciary was sustained, the court holding that the expression 'such law agent' in Section 9 (1) of the Summary Jurisdiction Act, 1881, meant not merely the law agent who had signed the complaint, but any qualified law agent.

It may, therefore, be taken as settled that, when a statute authorizes a person holding a particular office (other than a Procurator-Fiscal or Burgh Prosecutor), or empowers the authority charged with the execution of the statute to appoint a person to prosecute for contraventions of the statute, the person so authorized or appointed is a private and not a public prosecutor within the meaning of Section 9 of the Summary Jurisdiction Act, 1881, and he is entitled to instruct a qualified law agent to prepare and sign complaints on his behalf, and that any other qualified law agent he may instruct is entitled to appear in court and conduct the proceedings on his behalf.

[7] In *Colquhoun* v. *Magistrates of Dumbarton* (1907), S.C. (J.), 57 ; 14 S.L.T., 847, the provost, magistrates, and councillors of the burgh of Dumbarton, 'as local authority of said burgh under the Public Health (Scotland) Act, 1890,' prosecuted a dairy-keeper for a contravention of Section 6. In defence, it was objected that the complaint was incompetently laid, and that the complainers had no title to prosecute it. The Sheriff-Substitute repelled the objection and convicted the accused. In a suspension the High Court of Justiciary (Lords Ardwall, Dundas, and Mackenzie) sustained the objections and quashed the conviction. Lord Ardwall said : 'The question is whether the provost, magistrates, and town council of the burgh of Dumbarton have a title to sue a complaint for a contravention of the Sale of Food and Drugs Act. I am of opinion that they have not. It has been explained to us that, at common law, corporate bodies are not the proper parties to prosecute in respect of offences, but that that must be done by a public prosecutor, unless such corporate bodies are specifically empowered to sue. It is said, however, that they are so empowered by the Sale of Food and Drugs Act. We find the provisions for the recovery of penalties are contained in Section 33, Subsection (9), of the Act of 1875. It says they are to be recovered in a summary manner before the sheriff, and then follows this : " Every such penalty may be recovered at the instance of the Procurator-Fiscal of the jurisdiction, or of the person who caused the analysis to be made from which it appeared that an offence had been committed against some one of the provisions of this Act." It was argued that the person who caused the analysis to be made is really the local authority, on whom is laid the general duty of enforcing these Acts, and appeal was made to Section 2 of the Interpretation Act, 1889, as showing that the word " person " occurring in this provision might apply to them. It might do so if the " contrary intention " did not appear. I think the " contrary intention " does appear, because, if we go back to see who are the persons on whom the duty is laid of causing an analysis to be made, we find from Section 13 that certain officers may procure samples, " and shall submit the same to be analyzed by the analyst of the district," and then the analyst is to give a certificate to such officer. . . . There are obvious reasons why in every complaint of this kind there should be some individual to prosecute instead of the complaint being at the instance of a fluctuating public body itself. That is the policy underlying the provisions with respect to the appointment of burgh prosecutors in the Burgh Police Acts. In the present case the complaint ought, in terms of the Act, to have been at the instance of the Procurator-Fiscal or of Mr. Briggs, who was the sanitary inspector for the burgh.'

[8] This subsection is repealed. Section 20 contains a similar clause so far as Scotland is concerned. Section 6 of the Summary Jurisdiction (Scotland) Act, 1881, confers power upon judges to mitigate penalties, and limits the

alternative penalty of imprisonment in default of payment to periods graduated according to the amount of penalty. The court is also empowered. where a sum is adjudged to be paid, to allow time for payment, to direct payment to be made by instalments, or to require security or caution for the payment of such sums or instalments.

[9] The words in italics are repealed. All appeals against convictions under the Acts must be to the High Court of Justiciary under the Summary Prosecutions Appeals (Scotland) Act, 1875 (38 and 39 Vict., c. 62), and convictions may be brought under review of the same court by suspension.

34. Application of the Act to Ireland.[1]—In the application of this Act to Ireland—

The term ' borough ' shall mean any borough subject to the Act of the session of the third and fourth years of the reign of Her present Majesty, chapter one hundred and eight, intituled ' An Act for the Regulation of Municipal Corporations in Ireland.'

The term ' county ' shall include a county of a city and a county of a town not being a borough.

The term ' assizes ' shall, with respect to the county of Dublin, mean ' presenting term.'

The term ' treasurer of the county ' shall include any person or persons or bank in any county performing duties analogous to those of the treasurer of the county in counties, and with respect to the county of Dublin, it shall mean the finance committee.

The term ' police constable ' shall mean, with respect to the police district of Dublin metropolis, constable of the Dublin Metropolitan Police, and with respect to any other part of Ireland, constable of the Royal Irish Constabulary.

35. This Act shall commence on the first day of October, one thousand eight hundred and seventy-five.

This section is repealed by the Statute Law Review (No. 2) Act, 1893 (56 and 57 Vict., c. 54).

36. This Act may be cited as ' The Sale of Food and Drugs Act, 1875.'

This Act and the Acts of 1879, 1887, 1899, and 1907 may be cited as the Sale of Food and Drugs Acts, 1875 to 1899.

SCHEDULE.

To[1] .....

I, the undersigned, Public Analyst for the ..... do hereby certify that I received on the ..... day of ....., 19....., from[2] ..... a sample of ..... for analysis (which, when weighed,[3] .....), and have analysed the same, and declare the result of my analysis to be as follows :

I am of opinion that the same is a sample of genuine .....

Or—

I am of opinion that the said sample contained the parts as under, or the percentages of foreign ingredients as under :

.....

Observations.[4]

.....

As witness my hand this ..... day of ....., 19.....

A. B.

At .....

[1] Here insert the name of the person submitting the article for analysis.

[2] Here insert the name of the person delivering the sample.

[3] When the article cannot be conveniently weighed, this passage may be erased, or the blank may be left unfilled.

[4] Here the analyst may insert at his discretion his opinion as to whether the mixture (if any) was for the purpose of rendering the article potable or palatable, or of preserving it, or of improving its appearance, or was unavoidable, and may state whether in excess of what is ordinary, or otherwise, or whether the ingredients or materials mixed are or are not injurious to health. In the case of a certificate regarding milk, butter, or any article liable to decomposition, the analyst shall specially report whether any change had taken place in the constitution of the article that would interfere with the analysis.

There are numerous decisions as to the sufficiency of the analyst's certificate. The points raised have been mainly as to what variations were permissible in point of form, and as to whether the details of the analysis were sufficient to show that an offence had been committed. The distinctions are often somewhat fine, and the decisions not always easy to reconcile one with

another ; but the essential point to be kept in view is that the certificate, in the words of Lord Alverstone, ' ought to contain in it sufficient material to enable the magistrates to form a judgment on these materials whether the offence charged had been committed.'

It is only necessary to fill in the weight where weight is material to show the accuracy of the analysis *Sneath* v. *Taylor* (1901), 2 K.B., 376, 65 J.P., 548 ; *Hunter* v. *Wintrup* (1904), 7 F. (J.), 22. In the latter case it was held that it was in the discretion of the analyst to fill up the blank left for the weight. Lord McLaren said : ' I assume, in accordance with elementary principles, that in the absence of evidence to the contrary the analyst must be held to have complied with the statutory direction, and to have applied his mind to the question whether the article could be conveniently weighed or not. All proof on this point would appear to be superfluous, because I assume that he has done his duty, and the only question is whether he ought to have made a special report.'

It is not necessary to state the parts or percentage when the sample is genuine. All that the analyst requires to say is that the article is genuine. This is in accordance with the statutory form and with decision. See *Bakewell* v. *Davis* (1894), 1 Q.B., 296 ; 69 L.T., 832.

In that case the respondent was charged with selling milk deficient in fat to the extent of 22 per cent. The analyst's certificate was as follows : ' I am of opinion that the said sample contained the parts as under, the percentages of foreign ingredients as under : 22 per cent. of fat less than the natural. Observations : The abstraction of fat is a fraud, and may possibly be injurious to health.' It was held that this observation, although matter of opinion, should not necessarily vitiate the certificate. See *Newby* v. *Sims*, and *Fortune* v. *Hanson* (*infra*).

In *Newby* v. *Sims* (1894), 1 Q.B., 478, 70 L.T., 105, in which the charge was the selling of whisky adulterated with 13 per cent. of water in excess of the statutory limit, the certificate was as follows : ' I find that the sample contained an excess of water over and above what is allowed by Act of Parliament. I estimate the excess of water at 13 per cent. of the entire sample. I am of opinion that the sample is not a sample of genuine rum.' It was held that the certificate did not disclose any offence, and contained nothing to show that the analyst knew what percentage was allowed by Act of Parliament. The certificate ought to have stated the total percentage of water contained in the sample.

In *Fortune* v. *Hanson* (1896), 1 Q.B., 202 ; 74 L.T., 145, the charge was for selling milk to which water had been added. The certificate was as follows : ' I am of opinion that the said sample contained the percentage of foreign ingredients as under : 5 per cent. of added water to the prejudice of the purchaser.' It was held that the certificate was bad as evidence, under the Act, of adulteration, because it did not state the constituent parts of the sample. Hawkins (J.) said : ' If the analyst found in the milk some material substance which ought not to be found in the milk at all, it would be sufficient for the certificate to state that the sample . . . contained so much per cent. of foreign gredient ; but when the magistrates have to decide whether the sample contained . . . added water, the question becomes much more difficult, because water is to be found in milk in its most pure state. . . . I think the magistrates are entitled to inquire, and the Legislature intended they should have a statement in such a case as this of the parts of which the sample was composed. To say merely that a sample of milk contained 5 per cent. of added water is only to state the analyst's own opinion that water has been added. The magistrates have to exercise their own judgment on the question . . . they ought to be informed . . . what was the total percentage of water.'

In *Findley* v. *Haas* (1903), 99 L.T., 465, 19 T.L.R., 353, in which the charge was for selling brandy adulterated with water, the certificate was as follows :

' I am of opinion that the sample contained the parts as under, or percentages of foreign ingredients as under : It has been reduced from 25 degrees under proof to 27·6 degrees under proof.' The High Court (Lord Alverstone, C.J., Wills and Channell, JJ.) held, reversing the decision of the justices, that the certificate was sufficient, as it showed that the analyst knew what was the statutory standard for brandy under the Act of 1899, and disclosed an offence.

In *Bridge* v. *Howard* (1897), 1 Q.B., 80, 75 L.T., 300, in which the charge was for selling milk to which 6 per cent. water had been added, the certificate was as follows : ' I am of opinion that the sample contains the parts as under : Milk, 94 per cent. ; added water, 6 per cent. This opinion is based on the fact that the sample contained 7·97 solids-not-fat, whereas genuine milk contains not less than 8·5 solids-not-fat.' It was held that the certificate was sufficient, because it gave the reasons for the analyst's conclusion, and on the information so given the party charged could act and the justices form a judgment.

In *Goulder* v. *Rook*, *Bent* v. *Ormerod*, *Lee* v. *Bent*, *Barlow* v. *Noblett* (1901), 2 K.B., 290, 84 L.T., 719, the offence charged was for selling beer containing arsenic. The certificates stated in the one case that the sample of beer contains arsenic, in the other case that it contains a serious quantity of arsenic. They were held not to be sufficient on the ground that they did not state the constituents of ordinary beer, or the amount of arsenic found in the samples, and therefore they did not show that the offence charged had been committed.

There are several decisions to the effect that where the certificate did not specify whether any change had taken place in the constitution of the article to interfere with the analysis in articles, such as milk, butter, etc., they were insufficient. The following are the leading cases : *Peart* v. *Barstow* (1880), 44 J.P., 690, which was a milk case ; *Hudson* v. *Bridge* (1903), 67 J.P., 186, 19 T.L.R., 369, in which this charge was for selling vinegar of squills deficient in acetic acid, where an opinion was expressed that this deficiency in the analyst's certificate could not be cured by the oral evidence of the analyst. The decision was followed in Scotland in *Hunter* v. *Wintrup* (1904), 7 F. (J.), 22, in which the charge was for selling margarine as butter. Lord McLaren said, in concurring in the opinion of Lord Alverstone and Mr. Justice Channell, who decided *Hudson* v. *Bridge* : ' I entirely concur in the reasoning of these learned judges, and I think the direction in the schedule refers to the article in question, which purported to be butter sent for analysis. The analyst must keep in view the provisions as to a certificate relating to butter when the substance sent him for analysis is sent to him as butter. He cannot know what the article is until he has analysed it, but he is required to deal with it from the beginning as if it were butter, which is an article liable to decomposition. . . . In the ordinary case the examination of the analyst as a witness is dispensed with, and it is necessary, in order that advantage may be taken of this economical provision, that the report should be strictly in terms of the statute.'

In *Bayley* v. *Cook* (1905), 21 T.L.R., 235, the respondent was charged with selling milk deficient in fat to the extent of 53 per cent. It was objected on behalf of the respondent that the analyst's certificate was defective, owing to its not stating the standard on which it was based. The material parts of the certificate were as follows : ' I am of opinion that the sample contained the parts as under : milk-fat 1·4 per cent., milk solids other than milk-fat 5·6 per cent. Observations : This milk is deficient in milk solids other than milk fat to the extent of 2·9 per cent., which is equivalent to the addition of 34·2 per cent. of water. It is also deficient in milk-fat to the extent of 53·4 per cent of milk-fat.' It was held that the certificate was sufficient.

As to how far the analyst's certificate is sufficient evidence of the facts therein stated, see Section 21 (*ante*, p. 268, note 1) and Section 22 of the Act of 1899 (*post*, p. 326, note 2).

THE SALE OF FOOD AND DRUGS ACT AMENDMENT ACT, 1879

(42 *and* 43 *Vict.*, *c.* 30.)

AN ACT TO AMEND THE SALE OF FOOD AND DRUGS ACT, 1875 (JULY 21, 1879).

Whereas conflicting decisions[1] have been given in England and in Scotland in regard to the meaning and effect of Section 6 of the Sale of Food and Drugs Act, 1875, in this Act referred to as the principal Act, and it is expedient, in this respect and otherwise, to amend the said Act.

[1] The conflicting decisions referred to are *Davidson* v. *McLeod*, and *Hoyle* v. *Hitchman*, cited *infra*.

1. Short Title.—This Act may be cited for all purposes as the Sale of Food and Drugs Act Amendment Act, 1879.[1]

[1] The whole Acts may be cited as 'The Sale of Food and Drugs Acts, 1875 to 1907' (1899 Act, Section 28; and 1907 Act, Section 14).

2. In Sale of Adulterated Articles no Defence to allege Purchase for Analysis.[1]—In any prosecution under the provisions of the principal Act for selling to the prejudice of the purchaser[2] any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser,[2] it shall be no defence to any such prosecution to allege that the purchaser, having bought only for analysis, was not prejudiced by such sale. Neither shall it be a good defence to prove that the article of food or drug in question, though defective in nature or in substance or in quality, was not defective in all three respects.

[1] This enactment was rendered necessary by the decision of the High Court of Justiciary in *Davidson* v. *McLeod* (1877), 5 R. (J.), 1; 3 C., 511, where it was held by a full Bench (Lords Craighill and Adam dissenting) that, to constitute an offence under Section 6 of the Act of 1875, the sale of an article of food or a drug must be to the prejudice, though not necessarily the pecuniary prejudice, of the purchaser, and that a public officer purchasing for analysis under powers conferred by Sections 13 to 17 could not be prejudiced in the sense of Section 6.

In that case an opinion was expressed by two of the judges (the Lord Justice-Clerk and Lord Young) that, to infer a contravention of Section 6 of the Act, the article sold must be not of the 'nature,' not of the 'substance,' and not of the 'quality' of the article demanded, and not merely deficient in one or other of these attributes. In the later case of *Hoyle* v. *Hitchman* (1879), 4 Q.B.D., 233; 40 L.T., 252, the English courts took a different view; but, as by the decision in *Davidson* v. *McLeod* the Act was rendered inoperative in Scotland, the amendment introduced by this section was necessary.

[2] See notes to Sections 6 and 13 of Act of 1875 (*ante*, pp. 240, 258).

3. Officer, Inspector, or Constable, may obtain a Sample of Milk at the Place of Delivery to submit to Analyst.[1]— Any medical officer of health, inspector of nuisances, or inspector of weights and measures, or any inspector of a market, or any police constable[2] under the direction and at the cost of the local authority appointing such officer, inspector, or constable, or charged with the execution of this Act, may procure at the place of delivery[3] any sample of any milk in course of delivery[4] to the purchaser or consignee in pursuance of any contract[5] for the sale to such purchaser or consignee of such milk; and such officer, inspector, or constable, if he suspect the same to have been sold contrary to any of the provisions of the principal Act,[6] shall submit the same to be analysed, and the same shall be analysed,[7] and proceedings shall be taken, and penalties[8] on conviction be enforced in like manner in all respects as if such officer, inspector, or constable had purchased the same from the seller or consignor under Section 13 of the principal Act.

[1] Section 14 of the Act of 1899 extends the provision of this section 'to every other article of food,' but with the proviso that 'no samples shall be taken under this section except upon the request or with the consent of the purchaser or consignee.' It must, therefore, be kept in view that while samples of milk can be taken on delivery without the consent of the purchaser or consignee, samples of other articles cannot be taken without such consent.

[2] In *Harris* v. *Williams* (1899), 6 T.L.R., 47, it was held that where milk is delivered wholesale under a contract, the purchaser or consignee cannot institute proceedings, and that in such cases proceedings can only be taken under the provisions of this section by the officers named in Section 13 of the principal Act under the direction and at the cost of the local authority.

In *Holt* v. *Morris* (1893), 57 J.P., 441, the Recorder of West Bromwich held that an officer taking a sample under this section must be present when it is taken, so as to be able to see for himself and vouch for the manner in which the sample is procured. Whether an officer taking a sample under this section can do so by deputy has not been decided by a supreme court. It is difficult to see what there is in the language of the sections for any distinction between the taking of samples under this section and under Section 14 of the Act of 1875.

In *Rolf* v. *Thompson* (1892), 2 Q.B., 196; 67 L.T., 295, it was held that an inspector who took a sample under this section and divided it, retaining one part and submitting the other part to be analysed, was not bound to submit for analysis the whole sample taken by him.

In *McNair* v. *Cave* (1903), 1 K.B., 24; 87 L.T., 680, it was held that this section can only be put in force by the local authority within whose district the place of delivery is situated, an inspector having no power under this section to take samples in any place outside his own district.

[3] The sample can only be taken at the place of delivery, and when the article is in the course of delivery.

In *Filshie* v. *Evington* (1892), 2 Q.B., 200; 66 L.T., 199, the appellant, who lived at C., contracted with a dairy company for the sale to them of milk from his dairy, to be delivered in London, or at such other station as the purchaser should from time to time appoint, the carriage of the milk from C. to be paid

by the purchasers. The purchasers appointed H. as a station for the delivery of the milk under the contract. The appellant consigned milk from C. to the purchasers at H. Immediately on its arrival at the latter station, and before possession of it was taken by the purchasers, a sample was taken by an officer under this section, and was, upon analysis, found to be adulterated by the addition of water. It was contended on behalf of the appellant that C., and not H., was the place of delivery, on the ground that there was a provision in the contract for the payment of the carriage by the purchasers between C. and H. Notwithstanding this, the court held that H. was the place of delivery of the milk to the purchasers within the meaning of this section, and that the appellant was, therefore, rightly convicted of an offence under the Acts.

In *Lush* v. *Wilson* (1890), 54 J.P., 73, there was a verbal contract between a farmer and a retail milk-seller that a certain quantity of milk should be delivered to the latter every day. The first deliveries were made at Basingstoke, but eventually the milk was sent on every day to Reading, the milk-seller paying the carriage from Basingstoke. A sample was taken at Reading, and in a prosecution under Section 6 of the principal Act it was held that Reading was the place of delivery.

In *Sanders* v. *Sadler* (1906), 23 T.L.R., 11, the respondent contracted to buy from E. R. W., county of Nottingham, about 16 barn gallons of pure new milk with all its cream, delivered daily, carriage paid to Wanstead Park Station, properly cooled and in good condition. Churns of milk duly labelled in terms of Section 25 of the Act of 1875 reached the above station, and about forty-five minutes later were received by the respondent's servant. It was held in a prosecution for an offence under Section 6 that the place of delivery was Wanstead Park Station, and that the respondent was not bound to negative the possibility of the churns being tampered with during the forty-five minutes they were there.

[4] In *Semple* v. *Dunbar* (1904), 6 F. (J.), 65; 12 S.L.T., 253, the servant of the appellant, a wholesale milk-dealer, in pursuance of a contract between the appellant and a retail milk-seller, took milk from the appellant's cart, in cans belonging to Semple, into the milk-seller's shop, and there poured it into empty cans belonging to the milk-seller. A sanitary inspector and his assistant were present while this was being done, and immediately after the milk was poured into the milk-seller's cans the inspector took a sample of the milk from these cans for analysis under this section. The milk having on analysis been found to be deficient in fat, the wholesale milk-dealer was prosecuted for a contravention of Section 6, and was convicted. On an appeal, it was held by the High Court of Justiciary (Lords Justice-Clerk, Trayner, and Moncrieff) that the sample was taken while the milk was in course of delivery. Lord Moncrieff said : ' I think it would be a strained and mischievous interpretation of the statute to hold that the samples were not taken while the milk was in course of delivery. The milk passed at once into the custody of the inspector, and the purchaser had no opportunity, had he so wished, of tampering with it.'

See *Crawford* v. *Harding* (1906), 14 S.L.T., 422, where samples of milk were taken under this section in the same way. The Sheriff-Substitute held that the samples were taken in course of delivery, and although in a case stated for appeal to the High Court of Justiciary this was one of the questions of law submitted for the decision of the court, the decision of the Sheriff-Substitute on this point seems to have been acquiesced in.

[5] In *Phelan* v. *Rorke* (1883), 17 Ir.L.T., 649, a milkman was hawking milk from door to door. While he was pouring some milk into a customer's jug an inspector came up and demanded a sample, which was refused. There was no evidence of any contract for the sale of milk, but the court had no difficulty

in holding that the milk was being delivered in pursuance of a contract, and that the milkman was rightly convicted under Section 4 for refusing to give milk for analysis.

[6] In *Hiett* v. *Ward* (1894), 58 J.P., 132, 461 ; 70 L.T., 374, a farmer was charged with selling adulterated milk. A carrier was about to deliver a churn of milk to a dairyman for sale, when a pint of milk was bought of him, which, on analysis, was found to contain 10 per cent. of added water. The farmer contended that he did not sell, as the carrier was not his agent. The farmer was convicted under this section, the milk being then in course of delivery. It was held that the variation between the offence charged and the offence proved was covered by the Summary Jurisdiction Act, 1848 (11 and 12 Vict., c. 43, s. 1). The Summary Procedure (Scotland) Act, 1864 (27 and 28 Vict., c. 53, s. 5) covers a similar variation. That section provides that no objection to a complaint shall be allowed in respect of any variance between the complaint and the evidence adduced by the prosecutor, if such variance makes no change in the character of the offence charged.

[7] In various English cases it has been decided that an officer obtaining a sample of goods under this section at the place of delivery to the purchaser was under no obligation to comply with the provisions of Section 14 of the Act of 1875 by notifying to the seller his intention to have the sample analysed, or to divide the sample into three parts, and to give one to the seller or his agent. The decisions referred to are *Rouch* v. *Hall* (1880), 6 Q.B.D., 17 ; 45 J.P., 220; *Harris* v. *Williams* (1889), 6 T.L.R., 47 ; and *Rolfe* v. *Thompson* (1892), 2 Q.B., 196 ; 67 L.T., 295 ; *Morton* v. *Fyfe* (1896), 24 R. (J.), 9 ; 2 A., 174.

See, however, Section 10 of the 1899 Act, which provides that in the case of a sample of milk taken in course of delivery, or of margarine or margarine cheese forwarded by a public conveyance, the person taking the sample shall forward by registered parcel or otherwise a portion of the sample, marked and sealed or fastened up, to the consignor, if his name or address appear on the can or package containing the article sampled. It would thus appear that it is only necessary to send to the seller or consignor samples of milk, margarine, and margarine cheese.

[8] It has been frequently held that the procuring of each sample is a separate transaction, and that the vendor can be prosecuted for separate offences in respect of each sample. See *Fecitt* v. *Walsh* (1891), 2 Q.B., 304 ; 17 Cox C.C., 322.

4. Penalty for Refusal to give Milk to Analyst.—The seller or consignor or any person or persons entrusted by him for the time being with the charge of such milk, if he shall refuse to allow such officer, inspector, or constable to take the quantity which such officer, inspector, or constable shall require for the purpose of analysis,[1] shall be liable to a penalty not exceeding ten pounds.[2]

[1] The provisions of this section are now, by Section 14 of the Act of 1899, extended to every other article of food, with the proviso, however, that every sample taken under Section 14 of the Act of 1899 must be taken at the request or with the consent of the purchaser or consignee.

[2] The provision in Section 17 of the Act of 1899 for increase of penalty and subsequent convictions does not apply to a contravention of this section. (See Notes to Section 17 of the Act of 1875, pp. 264, 265.)

5. Sale in Streets.—Any street or open place of public resort shall be held to come within the meaning of Section 17 of the principal Act.

6. Reduction of Spirit allowed.—In determining whether an offence has been committed under Section 6 of the said Act, by selling to the prejudice of the purchaser spirits not adulterated otherwise than by the admixture of water, it shall be a good defence to prove that such admixture has not reduced the spirit more than twenty-five degrees under proof for brandy, whisky, or rum, or thirty-five degrees under proof for gin.[1]

[1] Indirectly this section fixes a standard of strength for the spirits named in it. The onus will, by Section 24 of the 1875 Act, be upon the accused to prove that the spirit has not been reduced below the standard. Notwithstanding this section, a vendor may also plead want of prejudice of the purchaser by notice given to him at the time of sale, verbally or by label under Section 8, that the article was diluted below, or not guaranteed to be of, the standard strength. See *Sandys* v. *Small*, and *Gage* v. *Elsey*, referred to under Section 6 of the 1875 Act, p. 242. *Pashler* v. *Stevenitt* (1876), 35 L.T., 862; 41 J.P., 136; and *Webb* v. *Knight* (1876), 2 Q.B.D., 530, were prosecutions for contravening Section 6 by selling diluted spirits, but they are superseded as authorities by this section.

In *Wilson and McFee* v. *Wilson* (1903), 6 F. (J.), 10, it was held that there was no statutory standard of purity for brandy, and that the court was entitled to decide what that standard was on the evidence before it. See *ante*, p. 247, for fuller notes on this case.

7. Extension of Meaning of County.—Every liberty having a separate court of quarter sessions, except a liberty of a cinque port, shall be deemed to be a county within the meaning of the said Act.

8. Quarter Sessions Boroughs not to contribute to County Analyst.—*The town council of any borough having a separate court of quarter sessions shall be exempt from contributing towards the expenses incurred in the execution of the principal Act in respect of the county within which such borough is situate, and the treasurer of the county shall exclude the expenses so incurred from the account required by section one hundred and seventeen of the Municipal Corporation Act*, 1835, *to be sent by him to such town council.*

This section is repealed by 45 and 46 Vict., c. 50, s. 5, but the exemption is re-enacted by Section 52 of that Act.

9. Provision for Boroughs with Separate Police.—The town council of any borough having under any general or local Act of Parliament, or otherwise, a separate police establishment, and being liable to be assessed to the county rate of the county within

which the borough is situate, shall be paid by the justices of such county[1] the porportionate amount contributed towards the expenses incurred by the county in the execution of the principal Act by the several parishes and parts of parishes within such borough in respect of the rateable value of the property assessable therein, as ascertained by the valuation lists for the time being in force.

[1] For 'justices of such county,' read 'county council' (Local Government Act, 1888).

10. Special Provision as to Time for Proceedings.—*In all prosecutions under the principal Act, and notwithstanding the provisions of Section 20 of the said Act, the summons to appear before the magistrates shall be served upon the person charged with violating the provisions of the said Act within a reasonable time, and in the case of a perishable article not exceeding twenty-eight days from the time of the purchase from such person for test purposes of the food or drug, for the sale of which in contravention to the terms of the principal Act the seller is rendered liable to prosecution, and particulars of the offence or offences against the said Act of which the seller is accused, and also the name of the prosecutor, shall be stated on the summons, and the summons shall not be made returnable in a less time than seven days from the day it is served upon the person summoned.*

This section is repealed by Section 27 of the 1899 Act and Schedule, but its provisions are re-enacted with alterations and additions in Section 19 of the same Act.

THE MARGARINE ACT, 1887

(50 *and* 51 *Vict., c.* 29.)

An Act for the Better Prevention of the Fraudulent Sale of Margarine (August 23, 1887).

Whereas it is expedient that further provision should be made for protecting the public against the sale as butter of substances made in imitation of butter, as well as of butter mixed with any such substances:

BE it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. Short Title.—This Act may be cited as the Margarine Act, 1887.

2. Commencement of Act.—This Act shall come into operation on the first day of January, one thousand eight hundred and eighty-eight.

3. Definition.—The word ' butter ' shall mean the substance usually known as butter, made exclusively from milk or cream, or both, with or without salt or other preservative, and with or without the addition of colouring matter.[1]

The word ' margarine '[2] shall mean all substances, whether compounds or otherwise, prepared in imitation of butter, and whether mixed with butter or not, and no such substance shall be lawfully sold, except under the name of margarine, and under the conditions set forth in this Act.

[1] In *Roose* v. *Perry and Company* (1900), 44 S.J., 503, the defendant was sued in the County Court for damages for breach of warranty that certain butter supplied by him was ' pure butter.' An appeal was taken to Divisional Court on the ground that the judge had erred in refusing to consider or decide what ' pure butter ' meant as an article of commerce, and in holding that, as a small quantity of boric acid had been added to it since it left the churn, it was not in fact ' pure butter,' and not therefore according to warranty. The court (Ridley and Bigham, JJ.) allowed the appeal. Mr. Justice Bigham said : ' If the decision of the judge was to be upheld in this case, it seems to me that the mere introduction of a little salt would render the defendants liable. I cannot believe the parties ever intended that the butter to be supplied should be in the simple state that it left the churn, for the purchaser expected that some preservative would be added so that it should keep good while exposed for sale in her shop. I should myself have had no hesitation in finding that this was pure butter within the meaning of the warranty, but that is a question of fact for the judge and not us to decide. I think that he went wrong in refusing to take into consideration evidence that this expression " pure butter " had a meaning as used between the plaintiff and defendants in trade apart from its natural meaning.'

[2] See the Act of 1899, Section 5, which extends the provisions of this Act to ' margarine-cheese,' and Section 25 of that Act for definition of ' margarine-cheese ' and ' cheese.'

Section 13 of the Butter and Margarine Act, 1907, substitutes for this definition of margarine the following : ' Any article of food, whether mixed with butter or not, which resembles butter, and is not milk-blended butter '; and Section 1 (1) (*b*) of the same Act defines milk-blended butter as ' any mixture produced by mixing or blending butter with milk or cream other than condensed milk or cream '; and Section 4 makes it an offence to prepare or manufacture for sale or consignment butter or margarine containing more than 16 per cent., or milk-blended butter containing more than 24 per cent. of water.

These enactments were rendered necessary by the practices disclosed in the following cases : In *Burton* v. *Mattinson* (1902), 86 L.T., 770 ; 66 J.P., 628, in answer to a request for margarine, a purchaser was supplied with a substance containing 21 per cent. of water, being, as the analyst certified, 5 per cent. more than margarine should contain. The seller contended that the article supplied was margarine, but the court held that it was margarine and water, and that the seller had rightly been convicted of an offence under Section 6 of the Act of 1875. This decision was followed in *Roberts* v. *Leeming* (1905), 69 J.P., 417 ; 3 L.G.R., 1031.

In *Bayley* v. *Pearks, Gunston, and Tee, Limited* (1902), 87 L.T., 67 ; 66 J.P., 790, it was held that a mixture of butter and fresh milk was not margarine, and notwithstanding Section 8 of the Act of 1899, might be sold as butter with a protective label, although it contained more than 10 per cent. of butter-fat.

See Act of 1907, Section 9, *post*, p. 336, as to conditions under which this substance may be dealt with, sold, or exposed for sale, possessed for sale, or described.

In *Tanner* v. *Dyball* (1906), 94 L.T., 539 ; 120 L.T.J., 57, the respondent went into the appellant's shop and asked for half a pound of 'Marvo,' and was served with a substance from a bottle labelled 'Margarine,' which substance, before being handed to the respondent, was wrapped in paper on which was printed in 1½-inch letters 'Margarine.' Inside the package was found a slip on which was printed : 'Marvo (registered by Act of Parliament). Without this slip none is genuine,' and behind the counter was a notice : 'Notice.—Marvo, the only butter substance equal in flavour to the finest dairy butter, to comply with the provisions of the Food and Drugs Act, is sold as margarine.' The Appeal Court held, reversing the decision of the magistrate, that the appellant had not sold a substance prepared in imitation of butter under a name other than margarine, within Section 3 of the Margarine Act of 1887, the judges holding that the article had really been sold as margarine, the fancy name being mainly to attract customers.

In *Keeloma Dairy Company, Limited*, v. *Jones* (1906) 22 T.L.R., 535, the respondent, an inspector under the Acts, asked at the appellants' shop for half a pound of 'keeloma,' and received a substance wrapped in a brown paper, with no label upon it. On the parcel being opened, it was found that there was a second wrapper of paper with the word 'margarine' printed upon it, as required by the Margarine Acts. Notices were displayed in the shop stating that 'keeloma' and 'overweight,' the new butter-substitutes, were sold there, and to comply with the Acts they were sold under the name of 'margarine.' The respondent and his deputy who made the purchase both knew that the substance named 'keeloma' was, in fact, margarine. The justices convicted the appellant of selling margarine under another name, contrary to this section. On appeal to the High Court, this decision was reversed. Mr. Justice Darling said the appeal must succeed. The Act provided that no substitute for butter should 'be lawfully sold except under the name of margarine,' but it did not follow because it was sold under another designation that it was sold 'except under the name of margarine.' That was laid down in the case of *Tanner* v. *Dyball*, which seemed to cover this case. He was unable to see that the points of difference were really material. He thought 'that many of these prosecutions that came before the court were childish. At the time the Act was passed butter-substitutes were new, and poor, ignorant people might be led to buy some stuff which the Legislature called margarine, under the impression that they were getting butter. But the thing had gone on so long that probably there was more margarine sold than butter. People knew perfectly well that they were not buying butter when they asked for something called "keeloma," or some such name. It was well known that all these things meant something that was not butter.'

Section 8 of the Act of 1907 renders the two last cases cited no longer authoritative. That section provides for fancy or other descriptive names approved by the Board of Agriculture and Fisheries being allowed in combination with the word 'margarine' on any wrappers, packages, advertisements, and invoices used in connection with margarine, if printed in type not larger than and in the same colour as the word 'margarine.'

4. Penalty.—Every person dealing in margarine,[1] whether wholesale or retail, whether a manufacturer, importer,[2] or as consigner

or consignee, or as commission agent or otherwise, who is found guilty of an offence under this Act, shall be liable on summary conviction for the first offence to a fine not exceeding twenty pounds,[3] and for the second offence to a fine not exceeding fifty pounds,[3] and for the third or any subsequent offence to a fine not exceeding one hundred pounds.[3]

[1] Or margarine-cheese (Section 5 of Act of 1899).

[2] For definition of 'importer,' see Section 1 (2) of Act of 1899.

[3] Section 8 of Act of 1899 imposes the penalties provided by this Act for the offence of selling margarine containing more than 10 per cent. of butter-fat. See Section 4 of Act of 1907, limiting the percentage of moisture in butter, margarine, and milk-blended butter, and imposing penalties for contraventions; also Section 5 of the same Act, making it an offence to import these articles containing moisture in excess of the specified limits. By Section 17 (2) of the Act of 1899 a person convicted of offences under this Act may in certain circumstances be imprisoned. See Section 12, *post*, as to proceedings under this Act.

5. Exemption from Penalty.—Where an employer is charged with an offence against this Act he shall be entitled, upon information duly laid by him, to have any other person whom he charges as the actual offender brought before the court at the time appointed for hearing the charge, and if, after the commission of the offence has been proved, the employer proves to the satisfaction of the court that he had used due diligence to enforce the execution of this Act, and that the said other person had committed the offence in question without his knowledge, consent, or connivance, the said other person shall be summarily convicted of such offence, and the employer shall be exempt from any penalty.

This section is adapted to English procedure. It does not seem to be frequently applied. In Scotland it has never, so far as reported, been applied, and is, indeed, quite unsuitable to Scotch summary procedure.

6. Marking of Cases.—Every person dealing in margarine in the manner described in the preceding section shall conform to the following regulations:

Every package,[1] whether open or closed, and containing margarine,[2] shall be branded or durably marked 'Margarine' on the top, bottom, and sides in printed capital letters not less than three-quarters of an inch square; and if such margarine[2] be exposed for sale[3] by retail,[4] there shall be attached to each parcel thereof so exposed, and in such manner as to be clearly visible to the purchaser, a label marked in printed capital letters not less than one and a half inches square, 'Margarine'; and every person selling margarine[2] by retail, save in a package duly branded or durably

marked as aforesaid, shall in every case deliver the same to the purchaser in [*or with*][5] a paper wrapper,[6] on which shall be printed in capital letters[2] [*not less than a quarter of an inch square*],[5] 'Margarine.'

The first part of this section applies to sales of margarine by wholesale, the second to sales by retail. The provisions of this section are extended to sales, wholesale and retail, of margarine-cheese by Section 5 of the Act of 1899, and of milk-blended butter by Section 9 of the Act of 1907.

[1] Section 6 of the Act of 1899 requires the brand or mark to be on the package itself, and not solely on a label, ticket, or other thing attached thereto. In *McNair* v. *Horan* (1904), 91 L.T., 555 ; 68 J.P., 518, the defendant had behind the counter of his shop, in full view of anyone entering the shop, a tub open at the top containing margarine. From the tub he scooped the margarine and delivered it to customers. It was held that the tub was a package within the meaning of this section.

[2] Or margarine-cheese or milk-blended butter, as the case may be.

[3] In *Crane* v. *Lawrence* (1890), 25 Q.B.D., 152 ; 63 L.T., 197, margarine was in the seller's shop for the purpose of sale. It was in a parcel not labelled as required by the Act, but it was behind a screen, and was invisible to customers in the shop. The court held that the parcel of margarine was not exposed for sale, and therefore did not require to be labelled.

In *Wheat* v. *Brown* (1892), 1 Q.B., 418 ; 66 L.T., 464, a dealer in margarine had on his counter a number of parcels of margarine, each parcel being wrapped in paper, so that the contents could not be seen, but the parcel was clearly in view. On the paper wrapper of each parcel the word 'Margarine' was printed in the required size of print, and was quite visible. The shopkeeper was prosecuted for failure to attach to the parcel the label required by this section. The justices held, on the authority of *Crane* v. *Lawrence, supra*, that the margarine being wrapped in paper, it was not exposed for sale. On appeal, their decision was reversed. Wright (J.) said : 'In this case the justices refused to convict the defendant upon the ground that the second part of Section 6 does not apply to margarine which is wrapped up in paper. That, in my opinion, is a wrong view of the section. The expression "exposed for sale" is a well-understood term, and cannot be limited so as to mean only "exposed to view."'

[4] In *Moore* v. *Pearce's Dining and Refreshment Rooms, Limited* (1895), 2 Q.B., 657 ; 73 L.T., 400, the proprietor of an eating-house sold to customers, for consumption on the premises only, slices of bread and haddocks with a mixture of Danish butter and margarine spread on the bread and placed on the haddocks. The mixture was cut from a lump on a shelf. There were no labels or wrappers on the slices or on the lump from which the mixture was cut. It was held that no offence had been committed under this section, and that its provisions did not apply to the kind of business carried on by the defendants.

In *Maguire* v. *Porter* (1905), 2 Ir.R., 147, there was on defendant's counter a butt of margarine from which the lid had been removed, and which was branded on the lid, bottom, and sides with the word 'Margarine.' The margarine was exposed for sale by retail. The prosecutor asked for one pound of margarine, and was supplied by defendant's assistant, who sliced that quantity off the margarine in the butt. Held that the butt of margarine exposed for sale was a parcel of margarine within the meaning of this section, and should have been labelled as required by the section.

In *Parkinson* v. *McNair* (1905), 69 J.P., 399; 93 L.T., 553, six separate pound pats of margarine arranged in the shape of a pyramid were exposed for sale by retail, each partly wrapped in paper, with no common wrapper or fastening. Held that the six pats formed a parcel, and not six parcels, and required only one label.

[5] The words in italics and brackets are repealed by Section 6 (3) of the Act of 1899.

[6] What is a 'wrapper' within the meaning of this section is a question which has been raised in several cases. In *Fyfe* v. *McLaughlin* (1893), 30 S.L.R., 899; 1 Adam, 74, it was held by the Court of Justiciary that a wrapper bearing the word 'Margarine' printed upon it in letters of the size and type required, and in such a way as to stand out as a word by itself, was in compliance with the section, although there was other matter of the nature of a trade advertisement printed on the wrapper.

In *World's Tea Company* v. *Gardner* (1895), 59 J.P., 358, margarine was sold in wrappers marked 'Margarine,' but the vendor delivered it to the purchaser in a second wrapper which concealed the marking on the first. It was held that no offence under this section had been committed.

In *Toler* v. *Bischop* (1895), 73 L.T., 403; 60 J.P., 18, several questions as to the meaning of wrappers and packages were decided. A pound of margarine was sold in a cardboard box to which a folded paper containing an advertisement of margarine was attached by a paper band. The word 'margarine' in letters of the required size was printed partly on the box, partly on the paper, and partly on the band. It was held—(1) that the box, paper, and band together constituted a wrapper within the meaning of this section; and (2) that the box was not a package within the meaning of the first part of the section; (3) an opinion was expressed that that part of the section did not apply to sales by retail; and (4) although the question did not arise for decision, Lord Russell of Killowen was strongly of opinion (contrary to the decision in *World's Tea Company* v. *Gardner*, *supra*) that it was the outside wrapper that should be marked.

See Section 6 (2) of the Act of 1899, substituting lettering of a different size and character from that permitted by this section, and prohibiting any other printed matter from appearing on the wrapper; but this provision is modified by Section 8 of the Act of 1907 (*post*, p. 336), which permits a fancy or other descriptive name approved by the Board of Agriculture and Fisheries being combined with 'margarine,' provided it is printed in type not larger than and in the same colour as the word 'margarine.' See same section as to name now to be used on wrappers and packages containing margarine, or labels attached to parcels or on advertisements or invoices of margarine; also Section 10 of the same Act, which provides that a name shall not be approved by the Board in connection with margarine if it refers to or is suggestive of butter or anything connected with the dairy interest.

7. Presumption against Vendor.—Every person dealing with, selling, or exposing, or offering for sale,[1] or having in his possession for the purpose of sale, any quantity of margarine[2] contrary to the provisions of this Act, shall be liable to conviction for an offence against this Act, unless he shows to the satisfaction of the court before whom he is charged that he purchased the article in question as butter,[3] and with a written warranty or invoice[4] to that effect, that he had no reason to believe at the time when he sold it that the article was other than butter, and that he sold it in the same

state as when he purchased it ;[5] and in such case he shall be discharged from the prosecution, but shall be liable to pay the costs incurred by the prosecutor unless he shall have given due notice to him that he will rely upon the above defence.[6]

[1] In *World's Tea Company* v. *Gardner* (1895), 59 J.P., 358, it was held that a handbill issued by a dealer in margarine offering to every purchaser of 'Kylos Creamery,' which was a preparation of margarine, a bonus of one pound on every two pounds purchased, was not offering for sale within the meaning of this section.

[2] Or margarine-cheese (Section 5 of Act of 1899).

[3] Or cheese (*ibid.*).

[4] Under Section 25 of the Act of 1875 an invoice can only be regarded as a warranty when it forms evidence of the contract of sale. By this section an invoice describing the article sold as butter is equivalent to a written warranty for the purpose of this section, although it contains no words of warranty. See notes to Section 25 of the Act of 1875, *ante*, p. 272.

[5] The onus of proof will be on the accused (Section 24 of Act of 1875). See *Fitzgerald* v. *Leonard* (1893), 32 Ir.R., 675. The defence made available to an accused by the section is extended to milk-blended butter by Section 9 (3) of the Act of 1907.

[6] The latter part of this section is superseded by Section 20 (6) of the Act of 1899. See note 8 to same section (*post*, p. 325).

8. Margarine Imported or Manufactured.—All margarine[1] imported into the United Kingdom of Great Britain and Ireland, and all margarine,[1] whether imported or manufactured within the United Kingdom of Great Britain and Ireland, shall, whenever forwarded by any public conveyance, be duly consigned as margarine[1] ; and it shall be lawful for any officer of Her Majesty's Customs or Inland Revenue, or any medical officer of health, inspector of nuisances [inspector of weights and measures],[2] or police constable, authorized under Section 13 of the Sale of Food and Drugs Act, 1875, to procure samples for analysis,[3] if he shall have reason to believe that the provisions of this Act are infringed on this behalf, to examine and take samples from any package, and ascertain, if necessary by submitting the same to be analyzed, whether an offence against this Act has been committed.[4]

[1] Or margarine-cheese (Section 5 of Act of 1899), or milk-blended butter (Section 9 of Act of 1907). Section 1 (1) (*a*) of the Act of 1899 provides that all margarine or margarine-cheese imported into the United Kingdom must be in packages conspicuously marked 'Margarine' or 'Margarine-cheese,' and Section 5 of the Act of 1907 makes the same provision as to milk-blended butter.

Section 9 (2) of the Act of 1907 extends (subject to the modification therein expressed) the provisions of this section to milk-blended butter. The effect of this enactment is to read into this section after 'margarine' in the three places where it occurs in this section the words 'or milk-blended butter.'

[2] By Section 12 of the Act of 1907 the words in square brackets are directed to be here inserted, but they are not to have effect in the administrative County of London.

[3] By the Act of 1899 the power of taking samples of articles of food and agricultural produce is given by Section 1 to the Commissioners of Customs with regard to certain imported articles (including margarine and margarine-cheese), and by Section 2 to the Local Government Board in relation to any matter affecting the general interest of the consumer, and to the Board of Agriculture (now Board of Agriculture and Fisheries) in relation to any matter appearing to affect the general interests of agriculture, and by Section 3 to these two Boards in default of local authorities where their failure in relation to articles of food affects the general interest of the consumer or the general interest of agriculture.

Section 10 of the Act of 1899 provides for part of a sample of margarine or margarine-cheese taken in transit being sent to the consignor. As regards samples of milk-blended butter taken in transit, there is no statutory direction to forward part to the consignor, unless this direction be implied in Section 9 of the Act of 1907. Obviously, the safe course is to proceed as if Section 10 of the Act of 1899 applied to milk-blended butter. See note 2 to Section 10 (*infra*).

[4] If the analyst's certificate shows that an offence has been committed, the officer who obtained the sample will proceed as if it had been obtained under Section 14 of the Act of 1875. See Section 12.

9. Registration of Manufactory.—Every manufactory of margarine[1] within the United Kingdom of Great Britain and Ireland shall be registered by the owner or occupier thereof with the local authority from time to time in such manner as the Local Government Boards of England and Ireland and the Secretary for Scotland[2] respectively may direct, and every such owner or occupier carrying on such manufacture in a manufactory not duly registered[3] shall be guilty of an offence under this Act.

[1] By Section 7 (4) of the Act of 1899 the provisions of this section relating to registration are extended to premises in which the business of a wholesale dealer in margarine or margarine-cheese is carried on, and by Section 1 (1) of the Act of 1907 the same provisions are extended to butter factories (which are defined in the section) and to manufactories of milk-blended butter (which is also defined). See note to Section 7 of the Act of 1899 (*post*, p. 317), and to Section 1 of the Act of 1907 (*post*, p. 329).

[2] Section 23 of the Act of 1899 transfers all the powers and duties of the Secretary for Scotland under the Acts to the Local Government Board for Scotland.

[3] By Section 7 (5) of the Act of 1899 (which is extended on this point to milk-blended butter by Section 1 of the Act of 1907) the registration must forthwith be notified by the local authority to the Board of Agriculture.

10. Power to Inspectors to take Samples without Purchase.—Any officer authorized to take samples under the Sale of Food and Drugs Act, 1875,[1] may, without going through the form of purchase provided by that Act, but otherwise acting in all respects in

accordance with the provisions of the said Act as to dealing with samples,[2] take for the purposes of analysis samples of any butter,[3] or substances purporting to be butter,[3] which are exposed for sale, and are not marked 'Margarine,'[4] as provided by this Act; and any such substance not being so marked shall be presumed to be exposed for sale as butter.[3]

[1] Section 13; also Section 2 of Act of 1899.

[2] Section 14 of Act of 1875. The powers of taking samples under the Acts are extended by Act of 1899, Sections 1, 2, and 3, to officers of the Commissioners of Customs, the Local Government Board, and the Board of Agriculture and Fisheries, and by Section 2 of the Act of 1907 to the officers of the two last-named Boards, and, in certain cases, to officers of local authorities as to articles in butter factories and premises registered for the manufacture of margarine cheese and milk-blended butter.

[3] Or cheese (Section 5 of Act of 1899).

[4] Or margarine-cheese (Section 5 of Act of 1899), or milk-blended butter (by approved name, Section 9 (1) of Act of 1907).

This section applies only to the articles with which it deals and which are exposed for sale, and therefore does not apply to samples taken under Section 8.

11. Appropriation of Penalties.—Any part of any penalty[1] recovered under this Act may, if the court shall so direct,[2] be paid to the person who proceeds for the same, to reimburse him for the legal costs of obtaining the analysis, and any other reasonable expenses to which the court shall consider him entitled.[3]

[1] See Sections 20 and 33 of Act of 1875 as to recovery of penalties.

[2] This direction will only be given when a private person is the prosecutor. An official prosecutor is invariably the officer of a local authority, who pays the cost of the analysis and of proceedings, and to whom are paid all penalties recovered.

[3] See Sections 29 and 33 (7) of Act of 1875.

Section 11 (2) of the Act of 1907 incorporates this section.

12. Proceedings.—All proceedings under this Act shall, save as expressly varied by this Act, be the same as prescribed by Sections 12 to 28 inclusive[1] of the Sale of Food and Drugs Act, 1875, and all officers[2] employed under that Act are hereby empowered[3] and required to carry out the provisions of this Act.

[1] Here it seems necessary to read in 'and Section 33.'

[2] See Sections 13 of Act of 1875, and 2 and 3 of Act of 1899, and 2 of Act of 1907.

[3] See Section 3 of Act of 1899, empowering and requiring the Local Government Board or Board of Agriculture (now Board of Agriculture and Fisheries) to put Acts in force in default of local authority.

Section 11 (2) of the Act of 1907 incorporates this Section.

13. Definition of Local Authority.—The expression 'local authority' shall mean any local authority authorized to appoint a public analyst under the Sale of Food and Drugs Act, 1875.[1]

[1] See Section 10 of Act of 1875, and Sections 3 and 25 of Act of 1899.

THE SALE OF FOOD AND DRUGS ACT, 1899

(62 *and* 63 *Vict., c.* 51.)

AN ACT TO AMEND THE LAW RELATING TO THE SALE OF FOOD AND DRUGS (AUGUST 9, 1899).

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

1. Precautions against Importation of Agricultural and other Produce Insufficiently Marked.—(1) If there is imported into the United Kingdom any of the following articles,[1] namely :

(*a*) Margarine or margarine-cheese,[2] except in packages conspicuously marked 'Margarine' or 'Margarine-cheese,' as the case may require ; or

(*b*) [*Adulterated or impoverished butter* (*other than margarine*) *or*[3]] adulterated or impoverished milk or cream, except in packages or cans conspicuously marked[4] with a name or description indicating that the butter or milk or cream has been so treated ; or

(*c*) Condensed, separated, or skimmed milk, except in tins or other receptacles which bear a label[5] whereon the words 'Machine-skimmed Milk' or 'Skimmed Milk,' as the case may require, are printed in large and legible type ; or

(*d*) Any adulterated or impoverished[6] article of food to which Her Majesty may by Order in Council direct that this section shall be applied, unless the same be imported in packages or receptacles conspicuously marked[4] with a name or description indicating that the article has been so treated ;

the importer shall be liable, on summary conviction, for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds.[7]

(2) The word 'importer' shall include any person who, whether as owner, consignor, or consignee, agent, or broker, is in possession of, or in anywise entitled to the custody or control of, the article; prosecutions for offences under this section shall be undertaken by the Commissioners of Customs;[8] and subject to the provisions of this Act this section shall have effect as if it were part of the Customs Consolidation Act, 1876.

(3) The Commissioners of Customs shall, in accordance with directions given by the Treasury after consultation with the Board of Agriculture, take such samples of consignments of imported articles of food as may be necessary for the enforcement of the foregoing provisions of this section.

(4) Where the Commissioners of Customs take a sample of any consignment in pursuance of such directions they shall divide it into not less than three parts, and send one part to the importer and one part to the principal chemist of the Government laboratories, and retain one part.

(5) In any proceeding under this section the certificate of the principal chemist of the result of the analysis shall be sufficient evidence[9] of the facts therein stated, unless the defendant require that the person who made the analysis be called as a witness.

(6) If, in any case, the Commissioners of Customs are of opinion that an offence against this section has been committed, they shall communicate to the Board of Agriculture for their information the name of the importer and such other facts as they possess or may obtain as to the destination of the consignment.

(7) For the purposes of this section an article of food[10] shall be deemed to be adulterated or impoverished if it has been mixed with any other substance, or if any part of it has been abstracted so as in either case to affect injuriously its quality, substance, or nature.

Provided that an article of food shall not be deemed to be adulterated by reason only of the addition of any preservative or colouring matter of such a nature and in such quantity as not to render the article injurious to health.[11]

[1] See Section 5 (1) of Act of 1907 (*post*, p. 333) for five articles added to the list given in this subsection.

[2] See Section 13 of Act of 1907 (*post*, p. 339) for new and substituted definition of margarine, and Section 25 of this Act (*post*, p. 327) for definition of margarine cheese; and Section 1 (1) (*b*) of Act of 1907 (*post*, p. 329) for definition of milk-blended butter.

[3] The words in italics within square brackets are repealed by Section 5 of Act of 1907.

[4] Section 6 of this Act provides that in the case of margarine or margarine cheese the brand or mark shall be on the package itself, and not solely on a label, ticket, or other thing attached thereto. The same condition will apply to milk-blended butter. See Section 5 of Act of 1907.

[5] It is not necessary to mark the tin or receptacle ; it is sufficient if a label be attached thereto.

[6] For what is meant by 'adulterated or impoverished,' see Subsection 7 of this section.

[7] Under Section 17 (2) the accused is also liable to be imprisoned, in certain circumstances.

In *Kelly* v. *J. and J. Lonsdale and Co., Limited* (1906), 22 T.L.R., 655, the respondents were charged at the instance of the appellant, one of the officers of Customs, with importing into this country from Holland adulterated butter in packages not marked, as required by this Section, with a name and description indicating that the butter had been so treated. The respondents proved that they had received the butter with a written warranty in the truth of which they believed and had reasonable grounds for believing, and they contended that under Section 25 of the Act of 1875 and Section 20 (1) (2) and (3) of this Act they, as importers, were entitled to be discharged from a prosecution under this Section. The magistrates sustained the respondents' contention, and discharged them. On appeal to the High Court (Ridley, Darling, and Bray, JJ.), this decision was reversed, the judges holding that, as contended by the appellant, the prosecution being one for importing adulterated butter, the defence of warranty set up by the respondents was not open to them, and was only applicable to the case of a sale by them of the goods so received.

[8] The provisions of this section are enforceable only by the Commissioners of customs. By Section 5 (4) of the Act of 1907, where a sample taken under this section as amended by that Act is certified by the principal chemist to be margarine or milk-blended butter, the Commissioners must, on receiving the certificate, notify the importer thereof.

[9] See note to Section 21 of Act of 1875. A copy of the analyst's certificate must be served upon the accused (Section 19 (2), *post*, p. 321). See Section 22, which extends the privilege conferred by this section to a certificate by a public analyst produced by a defendant ; but a copy of it requires to be sent to the prosecutor three days before the date of trial. See Section 5 (3) of Act of 1907, and notes thereon, particularly Note 6. For form of certificate, see schedule to the 1875 Act (*ante*, p. 292).

[10] For definition of 'food,' see Section 2 of Act of 1875 and Section 26 of this Act.

[11] See notes to Section 3 of the Act of 1875 (*ante*, p. 239), also Section 7 of the Act of 1907, giving the Local Government Board power after inquiry to make regulations as to the use of preservatives in the manufacture or preparation for sale of butter, margarine, or milk-blended butter.

2. Rules for Local Government Board or Board of Agriculture to sample Articles of Food.—(1) The Local Government Board may, in relation to any matter appearing to that

Board to affect the general interest of the consumer, and the Board of Agriculture may, in relation to any matter appearing to that Board to affect the general interests of agriculture in the United Kingdom, direct an officer of the Board to procure for analysis samples of any article of food, and thereupon the officer shall have all the powers of procuring samples conferred by the Sale of Food and Drugs Acts,[1] and those Acts shall apply as if the officer were an officer authorized to procure samples under the Sale of Food and Drugs Act, 1875, except that—

(*a*) The officer procuring the sample shall divide the same into four parts, and shall deal with three of such parts in the manner directed by section 14 of the Sale of Food and Drugs Act, 1875,[2] as amended by this Act,[3] and shall send the fourth part to the Board, and

(*b*) The fee for analysis[4] shall be payable to the analyst by the local authority of the place where the sample is procured.

(2) The Board shall communicate the result of the analysis of any such sample to the local authority, and thereupon there shall be the like duty and power on the part of the local authority to cause proceedings[5] to be taken as if the local authority had caused the analysis to be made.

[1] See Section 13 of the Act of 1875; Section 3 of the Act of 1879; Section 10 of the Act of 1887; Section 1 (3) of this Act; and Section 2 of the Act of 1907.

[2] P. 259.

[3] Section 13 (p. 319).

[4] Section 12 of the Act of 1875 entitles any purchaser to have samples of an article of food or drug analysed by a public analyst on payment of a fee not exceeding 10s. 6d.

[5] See Section 20 of the Act of 1875, and notes thereon, p. 266, as to the powers to prosecute by the person who caused the analysis to be made; and Section 3 (1) of this Act as to the duty of local authorities to enforce the provisions of the Acts.

In *Connor* v. *Butler* (1902), 2 I.R., 569, the defendant was prosecuted for a contravention of Section 17 of the Act of 1875 (refusing to sell to an officer), and for two contraventions of Section 6 of the Margarine Act, 1887 (exposing for sale unmarked margarine, and for selling and delivering margarine without a wrapper as required by the statute). An officer of the Irish Agricultural Department took a sample on November 12, and obtained an analysis of it. On December 4 the result of the analysis was communicated to the secretary of the local authority, who handed the certificate to the local inspector. The latter took out a summons on December 6 without special authority from the local authority. At a meeting on December 9 the inspector's action was approved. The magistrate dismissed the summons on the ground that the local inspector was not entitled to prosecute, not being the person who had caused the analysis to be made, and having acted without authority. The King's Bench

Division, on an appeal, reversed the decision, holding—(1) that any person, even a common informer, is entitled to prosecute under Section 17 of the Act of 1875 for refusing to sell; (2) that the inspector was entitled under Subsection 2 of this section to take proceedings, notwithstanding that he was not the person who had caused the analysis to be made; and (3) that the fact that he had no special authority was immaterial. An opinion was expressed that the ratification by the local authority of their inspector's action was unnecessary.

3. Power for Local Government Board or Board of Agriculture to act in Default of Local Authority.—(1) It shall be the duty of every local authority entrusted with the execution of the laws relating to the sale of food and drugs to appoint a public analyst,[1] and put in force from time to time, as occasion may arise, the powers with which they are invested, so as to provide proper securities for the sale of food and drugs in a pure and genuine condition, and in particular to direct their officers to take samples for analysis.

(2) If the Local Government Board or Board of Agriculture, after communication with a local authority, are of opinion that the local authority have failed to execute or enforce any of the provisions of the Sale of Food and Drugs Acts in relation to any article of food, and that their failure affects the general interest of the consumer or the general interests of agriculture in the United Kingdom, as the case may be, the Board concerned may, by order, empower an officer of the Board to execute and enforce those provisions or to procure the execution and enforcement thereof in relation to any article of food mentioned in the order.

(3) The expenses incurred by the Board or their officer under any such order shall be treated as expenses incurred by the local authority[2] in the execution of the said Acts, and shall be paid by the local authority to the Board on demand, and in default the Board may recover the amount of the expenses with costs from the local authority.

(4) For the purposes of this section an order of the Board shall be conclusive in respect of any default, amount of expenses, or other matter therein stated or appearing.

(5) Any public analyst appointed under the Sale of Food and Drugs Acts shall furnish such proof of competency as may from time to time be required by regulation framed by the Local Government Board.[3]

[1] The appointment of a public analyst by the local authority is now compulsory, and should they fail to appoint, they can no doubt be compelled to do so by the Local Government Board or the Board of Agriculture and Fisheries. In *Regina* v. *Leicester Guardians* (1899), 2 Q.B., 632; 81 L.T., 559, it was held that the duty imposed upon Guardians by Section 5 of the Vaccination Act, 1871, to appoint a vaccination officer might be enforced by a writ of mandamus upon the application of the Local Government Board.

[2] Should a local authority fail to put in force the powers with which it is invested under the statutes, the Local Government Board may do so, and recover the expense from the local authority.

[3] A general order by the Local Government Board as to the appointment of a public analyst, dated April 17, 1900, contains regulations as to the qualifications of public analysts, and the subjects in which they require to produce certificates of competency. See Section 10 of Act of 1875, *ante*, p. 256.

4. Power for Board of Agriculture to make Regulations as to Analysis of Milk, Cream, Butter or Cheese.[1]—(1) The Board of Agriculture may, after such inquiry as they deem necessary, make regulations for determining what deficiency in any of the normal constituents of genuine milk, cream, butter, or cheese, or what addition of extraneous matter or proportion of water, in any sample of milk (including condensed milk), cream, butter, or cheese, shall, for the purposes of the Sale of Food and Drugs Acts, raise a presumption,[2] until the contrary is proved, that the milk, cream, butter, or cheese is not genuine or is injurious to health, and an analyst shall have regard to such regulations in certifying the result of an analysis under those Acts.

(2) Any regulations made under this section shall be notified in the London and Edinburgh Gazettes, and shall also be made known in such other manner as the Board of Agriculture may direct.

[1] The Board of Agriculture have issued regulations as to milk, dated August 5, 1901; and as to British butter, dated April 22, 1902; and as to Irish butter, dated April 23, 1902. See these at pp. 245, of Appendix. See Section 6 of Act of 1907, extending the power of making regulations under this section to milk-blended butter.

[2] The meaning of this is that the fact that milk is below the standard is only *prima facie* evidence of its not being genuine, and it lays the onus of proving the contrary upon the accused (Section 24 of Act of 1875). That this onus is not an impossible or even a difficult one is shown by the numerous cases in which the contrary has been held proved, even when the deficiency was so great as to make it an absolute certainty that the milk could not have been produced by healthy, well-fed, well-housed, and properly milked cows.

Every one who has had experience in such prosecutions will admit that the practice varies greatly as to what amounts to evidence of the contrary. In England it seems that, on the whole, the regulations have been found to work satisfactorily. In some sheriffdoms in Scotland the same may be said, but in others the experience has been otherwise. Some sheriffs have held that the onus is one which it is almost impossible for the accused to discharge where the fat is under 3 per cent. One said that nothing short of the evidence of two or three witnesses who had constantly watched the milk from the time it left the cow until the sample was taken would satisfy him. Another said, where the milk was certified to be considerably under the standard, that he would be exceedingly sceptical of evidence adduced in proof of the genuineness of such milk; while another said, in judging whether or not evidence adduced by the accused amounted to proof of the contrary, he would disregard the analyst's certificate, no matter how much below the standard it

proved the milk to be. In one leading sheriffdom in Scotland it has been found difficult to obtain convictions, and some who have had experience in prosecutions prior to and since the regulations were issued unhesitatingly say they would prefer to be without the regulations, and so unsatisfactory has their experience of prosecutions under them been that they have ceased to take milk samples. The present writer, who has had considerable experience of prosecutions under the regulations, cannot go so far ; but he is of opinion that the law, as now administered, is far from satisfactory, and that a revision of it cannot long be delayed in the interest of the public. See notes to Section 6 of Act of 1875.

In *Hutchison* v. *Stevenson* (1902), 4 F. (J.), 69 ; 3 A. 651, Lord McLaren said it was unnecessary, in a prosecution for a contravention of Section 6 and the Regulations, that the Regulations should be noted as a production in the record of the proceedings.

5. Extension of Margarine Act, 1887, to Margarine-Cheese.—The provisions of the Margarine Act, 1887, as amended by this Act,[1] shall extend to margarine-cheese,[2] and shall apply accordingly, with the substitution of 'margarine-cheese' and 'cheese'[3] for 'margarine' and 'butter,'[4] and provided that all margarine-cheese sold or dealt in otherwise than by retail shall either be inclosed in packages marked[5] in accordance with the Margarine Act, 1887, as amended by this Act, or be itself conspicuously branded with the words 'Margarine-cheese.'

[1] See Sections 6, 7, 8, 10, 20 (4) of this Act, and Sections 5, 7, 8, 10 of the Act of 1907 ; also Section 13 of that Act for new definition of margarine.

[2] And to milk-blended butter (Section 9 of Act of 1907).

[3] And milk-blended butter (under the name to be approved by the Board).

[4] See Section 25 of this Act for definition of 'margarine-cheese' and 'cheese,' and Section 1 (1) (*b*) of Act of 1907 for definition of milk-blended butter.

[5] See Section 6 of the Act of 1907 ; Section 6 of this Act ; and Sections 8 and 9 of Act of 1907.

6. Marking of Margarine and Margarine-Cheese.—(1) Where under this Act or the Margarine Act, 1887, it is required that any package containing margarine or margarine-cheese[1] shall be branded or marked,[2] the brand or mark shall be on the package[3] itself, and not solely on a label, ticket, or other thing attached thereto.

(2) The letters required to be printed on the paper wrapper in which margarine or margarine-cheese is sold[4] shall be capital block letters not less than half an inch long[5] and distinctly legible, and no other printed matter[6] shall appear on the wrapper.

(3) The words 'or with' in Section 6 of the Margarine Act, 1887, shall be repealed.

[1] Or milk-blended butter (Section 9 of Act of 1907).

[2] See Section 6 of the Act of 1887 ; Section 1 (1) and (5) of this Act ; and Sections 5 (1) (*h*), 8 and 9 of Act of 1907.

[3] This word is used in connection with margarine sold wholesale. See food part of Section 6 of 1887.

[4] This refers to sales by retail. See latter part of Section 6 of Act of 1887.

[5] 'Half an inch' is substituted for 'quarter of an inch.'

[6] See note to Section 6 of Act of 1887 as to decision in *Fyfe* v. *McLaughlin* (1893), 30 S.L.R., 899; 1 A., 74; and *World's Tea Company* v. *Gardner* (1895), 59 J.P., 358, which led to the amendment being passed.
See also Section 8 of Act of 1907, which makes it an offence for any person dealing in margarine to describe it in any wrapper enclosing margarine, or on any package containing margarine, or in any label attached to a parcel of margarine, or in any advertisement or invoice of margarine, by any other name than either margarine or a name combining the word 'margarine' with a fancy or descriptive name approved by the Board, and printed in type not larger than, and in the same colour as, the word 'margarine.' All wrappers enclosing margarine, however numerous they may be, must now have the word 'margarine' combined with the approved fancy name, if any, printed upon them, as stipulated in Section 6 of the Act of 1907.

7. Provisions as to Manufacturers of and Dealers in Margarine and Margarine-Cheese.—(1) Every occupier of a manufactory of margarine or margarine-cheese, and every wholesale dealer in such substances, shall keep a register showing the quantity and destination of each consignment of such substances sent out from his manufactory or place of business, and this register shall be open to the inspection of any officer of the Board of Agriculture.

(2) *Any officer of the Board of Agriculture shall have power to enter at all reasonable times any manufactory of margarine or margarine-cheese, and to inspect any process of manufacture therein, and to take samples for analysis.*[1]

(3) If any such occupier or dealer—

(*a*) Fails to keep such a register, or
(*b*) Refuses to produce the register when required to do so by an officer of the Board of Agriculture, or
(*c*) Fails to keep the register posted up to date, or
(*d*) Wilfully makes any entry in the register which is false in any particular, or
(*e*) Fraudulently omits to enter any particular which ought to be entered in the register,

he shall be liable on summary conviction for the first offence to a fine not exceeding ten pounds, and for any subsequent offence to a fine not exceeding fifty pounds.

(4) The provisions of Section 9 of the Margarine Act, 1887 (50 and 51 Vic., c. 29), relating to registration of manufactories, shall extend to any premises wherein the business of a wholesale dealer in margarine or margarine-cheese is carried on.

(5) The registration of a manufactory or other premises shall

be forthwith notified by the local authority to the Board of Agriculture.

[1] The Act of 1907, Section 2 (5), repeals Subsection 2 of this section. Section 1 (2) of the same Act extends this section relating to the consignments of margarine, with the necessary adaptations, to consignments of milk-blended butter; and Section 1 (1) extends, with the necessary adaptations, the provisions of Section 9 of the Act of 1887, as amended by this section relating to manufactures of margarine and margarine-cheese, to butter factories and premises in which milk-blended butter is manufactured. In place of Subsection 2, repealed, Section 2 of the Act of 1907 makes provision for the inspection of factories registered under the Acts and the processes of manufacture, etc., carried on therein, and for the entry in certain circumstances into *unregistered* premises in which there is reason to believe any process of manufacture, etc., is carried on, or in which butter is made or stored. See Section 2 of the Act of 1907, and notes thereon, *post*, p. 331.

In *Hart* v. *Cohen and Van der Laan* (1902), 4 F., 445, the Court of Session held that the power of inspection conferred by this section carried with it a right to take notes from the register kept in terms of the section, and the appellants, a firm of margarine dealers, who had produced the register at the request of the inspector, but had removed it when the inspector began to take notes from it, were held to have been rightly convicted of an offence under Subsection 2 (now repealed) for failing to produce the register. This case is still applicable to contraventions of this section, but the penalties will be either those imposed by Section 16 of this Act for impeding an officer in the discharge of his duties, or those provided by Section 11 of the Act of 1907 for an offence under that Act.

8. Restriction on Amount of Butter-Fat in Margarine.—It shall be unlawful to manufacture, sell, expose for sale,[1] or import any margarine the fat of which contains more than 10 per cent. of butter-fat,[2] and every person who manufactures, sells, exposes for sale, or imports any margarine which contains more than that percentage, shall be guilty of an offence under the Margarine Act, 1887,[3] and any defence which would be a defence under Section 7 of that Act[4] shall be a defence under this section, and the provisions of the former section shall apply accordingly.

Provided that nothing in this section shall apply to any margarine manufactured or imported in fulfilment of any contract made before the twentieth day of July, 1899.

[1] See note to Section 6 of Act of 1887 for decisions as to meaning of 'exposed for sale.'

[2] In *Bayley* v. *Pearks, Gunston, and Tee, Limited* (1902), 87 L.T., 67; 66 J.P., 790, it was held that butter blended with milk was not margarine, even although it contained more than 10 per cent. of butter-fat, and that it might be sold as butter under a protective label. This decision led to the inclusion in the Butter and Margarine Act of 1907 of the provisions as to milk-blended butter.

[3] See Section 4 of Act of 1887.

[4] By Section 7 of the Act of 1887 the defence competent to a person charged with selling margarine contrary to the provisions of the Act is proof to the

satisfaction of the Court that he purchased the article as butter, and with a written warranty or invoice to that effect. As it is illegal to manufacture or sell as margarine an article which contains more than 10 per cent. of butter-fat, it would be no defence to a prosecution under this section for the accused to plead that he had bought an article containing more than 10 per cent. of butter-fat as margarine with a warranty.

See Section 5 (1) (*f*) of Act of 1907, making it an offence to import margarine containing more than 16 per cent. of water or more than 10 per cent. of butter-fat.

9. Provision as to Name and Address of Person selling Milk or Cream in a Public Place.—Every person who, himself, or by his servant, in any highway or place of public resort sells milk or cream from a vehicle or from a can or other receptacle[1] shall have conspicuously inscribed on the vehicle or receptacle his name and address, and in default shall be liable on summary conviction to a fine[2] not exceeding two pounds.

[1] In *Crabtree* v. *Skelton* (1901), 70 L.J.K.B., 560, it was held that, where a milk-seller sold milk, sometimes from a cart, and sometimes from cans which he took from the cart, and carried about from house to house, the name and address must be on the cart if the sale was from the cart, and on the cans if the sale was from the cans.

[2] The provisions of Section 17 of the Act, providing for an increased penalty for a second and subsequent offences, do not apply to a fine under this section.

10. Division of Samples taken in Course of Delivery or Transit.—In the case of a sample taken of milk in course of delivery, or of margarine or margarine-cheese[1] forwarded by a public conveyance, the person[2] taking the sample shall forward by registered parcel or otherwise a portion of the sample marked, and sealed, or fastened up, to the consignor if his name and address appear on the can or package containing the article sampled.

[1] It is not clear that this section is, by the Act of 1907, made applicable to milk-blended butter, unless that it is implied in Section 9. Obviously the safe course for officers taking samples is to proceed as if it did apply.

[2] The person can only be one or other of officers mentioned in Section 3 of the Act of 1879, and Section 8 of the Act of 1887. See notes to these sections, *ante*, pp. 296, 306.

11. Provision as to Condensed, Separated, or Skimmed Milk.—Every tin or other receptacle containing condensed, separated, or skimmed milk[1] must bear a label clearly visible to the purchaser on which the words 'Machine-skimmed Milk,' or 'Skimmed Milk,' as the case may require, are printed in large and legible type, and if any person sells or exposes or offers for sale[2] condensed, separated, or skimmed milk in contravention of this

section, he shall be liable on summary conviction to a fine not exceeding ten pounds.[3]

[1] This section applies only to condensed separated and condensed skimmed milk, and the offence thereby created is selling or exposing or offering for sale such milk without a label. The importer is also liable to a penalty (Section 1 (1) (*c*) of Act of 1879).

[2] See note 3 to Section 6, and note 1 to Section 7 of Act of 1887 (*ante*, pp. 304, 306).

[3] There is no increased penalty for second or subsequent offences.

12. Notice of Mixtures.[1]—The label referred to in Section 8 of the Sale of Food and Drugs Act, 1875, shall not be deemed to be distinctly and legibly written or printed within the meaning of that section unless it is so written or printed that the notice of mixture given by the label is not obscured by other matter[2] on the label: provided that nothing in this enactment shall hinder or affect the use of any registered trade-mark, or of any label which has been continuously in use for at least seven years before the commencement of this Act; but the Comptroller-General of Patents, Designs, and Trade-marks shall not register any trade-mark purporting to describe a mixture unless it complies with the requirements of this enactment.

[1] See notes to Section 8 of Act of 1875, *ante*, p. 251.

[2] 'Other matter' is not prohibited, provided it does not obscure the notice of mixture given by the label.

13. Amendment of 38 and 39 Vict., c. 63. as to Samples.—In Section 14 of the Sale of Food and Drugs Act, 1875, the words 'offer to' and the words 'proceed accordingly and shall'[1] shall be repealed.

[1] These words are also repealed by Section 27 and the schedule.

14. Taking Samples in Course of Delivery.—The provisions of Section 3 and Section 4 of the Sale of Food and Drugs Act Amendment Act, 1879[1] (relating to the taking of samples of milk in course of delivery) shall apply to every other article of food: Provided that no samples shall be taken under this section except upon the request or with the consent of the purchaser or consignee.

This section applies to every article of food other than milk, and samples can only be taken at the request or with the consent of the purchaser or consignee, and by officers authorized by Section 13 of the Act of 1875 and by Sections 1 (3), 2, and 3 of the Act of 1899. See note 1 to Section 14 of Act of 1875 (*ante*, p. 260), and note 7 to Section 3 of Act of 1879 (*ante*, p. 298).

Section 10 of this Act requires the person taking a sample of the articles named therein in course of delivery to send a portion of the sample to the consignor, if his name and address appear on the can or package.

15. Amendment of 38 and 39 Vict., c. 63, as to Registered Parcels.—In Section 16 of the Sale of Food and Drugs Act, 1875, the words 'registered parcel' shall be substituted for the words 'registered letter.'

16. Obstruction of Officer in Discharge of his Duties.—Any person who wilfully obstructs or impedes any inspector or other officer[1] in the course of his duties under the Sale of Food and Drugs Acts, or by any gratuity, bribe, promise, or other inducement prevents, or attempts to prevent, the due execution by such inspector or officer of his duty under those Acts, shall be liable, on summary conviction, for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds.[2]

[1] The officers are those named in Section 13 of the Act of 1875, and those procuring samples under Sections 1, 2, and 3 of this Act and under Section 4 of the Act of 1907.

[2] See Section 17 of the Act of 1875, and Section 4 of the Act of 1887, and notes thereon.
Under next section he may also, in the circumstances there mentioned, be imprisoned.

17. Penalties for Offences under the Sale of Food and Drugs Acts.—(1) Where, under any provision of the Sale of Food and Drugs Act, 1875, a person guilty of an offence is liable to a fine which may extend to twenty pounds as a maximum, he shall be liable for a second offence under the same provision to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds.

(2) Where, under any provision of the Sale of Food and Drugs Acts, a person guilty of an offence is liable to a fine exceeding fifty pounds, and the offence, in the opinion of the court, was committed by the personal act, default, or culpable negligence of the person accused, that person shall be liable (if the court is of opinion that a fine will not meet the circumstances of the case) to imprisonment, with or without hard labour, for a period not exceeding three months.

This section applies to the greater number of offences under the Acts. See Sections 6, 7, 9, and 27 of the Act of 1875; Section 4 of the Act of 1887; Sections 1, 8, 16, and 20 of this Act; and Section 11 of the Act of 1907.
See notes to Section 33 (9).

18. Articles sold in Tins or Packets.—Notwithstanding anything in Section 17 of the Sale of Food and Drugs Act, 1875, where

any article of food or drug is exposed for sale in an unopened tin or packet duly labelled, no person shall be required to sell it except in the unopened tin or packet in which it is contained.

See Section 17 of the Act of 1875 (*ante*, p. 264).

19. Time for Proceeding and Regulation as to Summons.—(1) When any article of food or drug has been purchased from any person for test purposes, any prosecution under the Sale of Food and Drugs Acts, in respect of the sale thereof, notwithstanding anything contained in Section 20 of the Sale of Food and Drugs Act, 1875, shall not be instituted after the expiration of twenty-eight days[1] from the time of the purchase.

(2) In any prosecution under the Sale of Food and Drugs Acts the summons shall state particulars[2] of the offence or offences alleged, and also the name of the prosecutor,[3] and shall not be made returnable in less time than fourteen days[4] from the day on which it is served, and there must be served therewith a copy of any analyst's certificate obtained on behalf of the prosecutor.

[1] Section 10 of the Act of 1879 is repealed, and this section takes its place. Under that Act the summons or complaint in any prosecution had to be 'served upon the person charged with violating the provisions of the said Act within a reasonable time, and in the case of a perishable article not exceeding twenty-eight days from the time of the purchase,' and the summons was returnable within seven days. By this section the limit of twenty-eight days applies to every article, but the phraseology is different. The new enactment is that 'any prosecution . . . shall not be instituted after the expiration of twenty-eight days from the date of the purchase.' This raises the question, When is a prosecution instituted? Is it when the information is lodged, or the date of service of the summons or complaint?

In England the question has been decided in *Brooks* v. *Bagshaw* (1904), 2 K.B., 798. In that case an information was laid and a summons issued within the twenty-eight days, but the summons not having been served within the time prescribed by the Act, it was allowed to drop, and after the expiration of the twenty-eight days a fresh summons was applied for on the same information, and issued. It was held that, there having been no adjudication on the merits of the first summons, a second summons could be issued on the original information, and that it was immaterial that the second summons was issued after the expiration of the twenty-eight days, the information which was the institution of the prosecution having been lodged within that time.

In *Beardsley* v. *Giddings* (1904), 1 K.B., 847, it was held that the laying of the information, and not the service of the summons, was the institution of the prosecution.

These decisions cannot be accepted as authoritative in Scotland, where the lodging of an information in prosecutions under the Summary Jurisdiction Acts is almost unknown. The step of procedure which corresponds to it is the lodging of the complaint with the clerk of the court in order that a warrant may be written upon it for citing the respondent to appear in court to answer to the complaint. But it is doubtful if even this would be held by the Scotch courts to be the institution of a prosecution. In proceedings under statutes containing a similar limitation it has been held that an action has not been raised until the summons has been served.

In *Frew* v. *Morris* (1897), 24 R. (J.), 50 ; 34 S.L.R., 527, the court of Justiciary held, in accordance with Scotch rules as to computation of time, that the day on which the purchase took place was not to be counted in calculating the statutory period. This decision was under the repealed section, but it is equally applicable to the substituted enactment. A similar decision was given in England in *Radcliffe* v. *Bartholomew* (1892), 1 Q.B., 161 ; 65 L.T., 677, which was a prosecution under the Cruelty to Animals Act, 1849, which provided that complaints under the Act were to be made ' within one calendar month after the cause of such complaint shall arise.' It was held that an information laid on June 30 for an offence committed on May 30 was in time. This condition as to the time of instituting a prosecution is imperative.

In *Dixon* v. *Wells* (1890), 25 Q.B.D., 249; 62 L.T., 812, it was held that the summons, having been signed and issued by a Justice who had not heard the complaint, was invalid, and that the defect was not cured by the appearance of the accused under protest. This decision is inapplicable to Scotch procedure. It will be noted that the limitation of the twenty-eight days only applies when an article has been purchased ' for test purposes.' Accordingly, it was held in *Cook* v. *White* (1896), 1 Q.B., 284 ; 74 L.T., 53, that the limitation did not apply to a prosecution under Section 17 of the Act of 1875 for refusing to sell; nor would it apply to a prosecution under Section 27 of the Act of 1875 for giving a false warranty; nor to a prosecution under Section 16 of this Act for obstructing an officer in discharge of his duty. But these prosecutions are subject to the limitation of six months imposed by the Summary Jurisdiction Act, 1848 (*Whitaker* v. *Pomfret Brothers* (1902), 1 K.B., 661 ; 86 L.T., 420). A similar limitation is contained in the Summary Procedure (Scotland) Act, 1864, Section 24.

[2] In England the question whether or not sufficient particulars have been given seems to be one for the discretion of the Judge who tries the case, and if an objection is taken on account of want of particulars, an adjournment of the hearing is made, so that particulars may be given—a sensible course, which might advantageously be followed in Scotland, where, in similar circumstances—*i.e.*, where, if an objection to a complaint for want of specification is sustained—the complaint is usually dismissed. See *Reg.* v. *Wakefield* (1890), 54 J.P., 148 ; *Barnes* v. *Rider* (1892), 68 L.T., 447 ; 57 J.P., 473 ; *Neal* v. *Devenish* (1894), 1 Q.B., 544 ; 70 L.T., 628. An objection of that kind can hardly ever be sustained now, as all particulars will be given in the analyst's certificate, of which a copy must be served with the summons or complaint. See *Wilson* v. *McLaughlin* (1907), S.C. (J.), 61. An objection may still be taken to the certificate on the ground that the materials contained in it are insufficient to show that the offence charged had been committed. See notes on schedule to Act of 1875, *ante*, pp. 292-294.

In *Lindsay* v. *Low and Co.* (1902), 4 F. (J.), 45, a complaint was held to be irrelevant owing to the time and place of the sale constituting the offence not having been relevantly specified. See *Wilson* v. *McLaughlin*, *supra*.

In *Hamilton* v. *Morrison* (1903), 5 F. (J.), 80, which was a prosecution for selling milk deficient in fat, the complaint was dismissed because it did not specify the article which the purchaser demanded.

[3] The name of the prosecutor was invariably given ; now it is imperative. In *Burns* v. *Williamson* (1897), 24 R. (J.), 58 ; 2 A., 308, a complaint in the form authorized by the Burgh Police Act, 1892, and bearing to be at the instance of the Burgh Prosecutor, without giving his name, was held to be bad under Section 10 of the Act of 1879, which, on this point, the substituted provision in this section repeats.

[4] This means that at least fourteen clear days must elapse between the date of service and the date fixed for the appearance of the defendant or

respondent in court (*McQueen* v. *Jackson* (1903), 2 K.B., 163; 88 L.T., 871). In *Dunlop* v. *Goudie* (1895), 22 R. (J.), 34; 1 A., 554, it was held that Section 10 of the Act of 1879 applied to Scotland, and that an *inducia* of seven days was necessary, so that an *inducia* of fourteen days is now necessary.

See Section 22 (2) of this Act as to service upon the prosecutor at least three days before the return day of a copy of a certificate of a public analyst to be founded on in defence.

20. Provisions as to Use of Warranty or Invoice as Defence, and Proceedings against the Warrantor.—(1) A warranty or invoice[1] shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant has, within seven days after service of the summons, sent to the purchaser a copy of such warranty[2] or invoice with a written notice stating that he intends to rely on the warranty or invoice, and specifying the name and address of the person from whom he received it, and has also sent a like notice of his intention to such person.

(2) The person by whom such warranty or invoice is alleged to have been given shall be entitled to appear at the hearing and to give evidence,[3] and the court may, if it thinks fit, adjourn the hearing to enable him to do so.

(3) A warranty or invoice given by a person resident outside the United Kingdom shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts, unless the defendant proves[4] that he had taken reasonable steps to ascertain, and did, in fact, believe in the accuracy of the statement contained in the warranty or invoice.

(4) Where the defendant is a servant of the person who purchased the article under a warranty or invoice he shall, subject to the provisions of this section, be entitled to rely on Section 25 of the Sale of Food and Drugs Act, 1875, 38 and 39 Vic., c. 67, and Section 7 of the Margarine Act, 1887, 50 and 51 Vic., c. 29, in the same way as his employer or master would have been entitled to do if he had been the defendant, provided that the servant further proves that he had no reason to believe that the article was otherwise than that demanded by the prosecutor.[5]

(5) Where the defendant in a prosecution under the Sale of Food and Drugs Acts has been discharged under the provisions of Section 25 of the Sale of Food and Drugs Act, 1875, as amended by this Act, any proceedings under the Sale of Food and Drugs Acts for giving the warranty relied on by the defendant in such prosecution may be taken as well before a court having jurisdiction in the place where the article of food or drug to which the warranty relates was purchased for analysis as before a court having jurisdiction in the place where the warranty was given.[6]

(6) Every person who, in respect of an article of food or drug sold by him as principal or agent, gives to the purchaser a false

warranty in writing, shall be liable on summary conviction, for the first offence, to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds,[7] unless he proves to the satisfaction of the court that when he gave the warranty he had reason to believe that the statements or descriptions contained therein were true.[8]

[1] It is only as to margarine that an invoice is available as a warranty (Section 7 of Act of 1887), unless the invoice evidences the contract and contains a warranty (*Hawkins* v. *Williams* (1895), 59 J.P., 533). See notes to Section 25 of Act of 1875, *ante*, p. 272, and to Section 7 of the Act of 1887, *ante*, p. 306. An invoice of milk-blended butter is available as a warranty (Section 9 (3) of Act of 1907).

[2] In *Irving* v. *Callow Park Dairy Company, Limited* (1902), 87 L.T., 70; 66 J.P., 804, the defendants, who had entered into a contract with a farmer for a periodical supply of milk with warranty of its purity, were prosecuted under Section 6 of the Act of 1875. They gave notice that they relied on a warranty, which was contained, they said, in labels bearing the words 'Warranted pure, with all its cream, delivered under contract,' attached to cans in which the milk was delivered. They sent a copy of the labels to the prosecutor, but they did not send a copy of the letters between them and the granter of the warranty, which constituted the contract under which the milk was sold. It was held that the terms of the subsection had been complied with.

Lord Alverstone said: 'A copy of such warranty . . . refers back to Section 25 of the Act of 1875, and means a copy of that which entitles the defendant to believe that the article was the same in nature, substance, and quality as that demanded by the prosecutor. Therefore, *prima facie*, that means a copy of the terms of the warranty on which the defendant bought, in order that the prosecutor may know what the defence is going to be. That is shown by the latter part of the section, which shows that the substance of the matter is to be told. A copy of the correspondence would not be half as useful as a copy of the terms of the warranty. The broad view of the statute is that it is necessary to prove that this was a purchase by the defendant under a warranty which justifies the resale.'

In *Farthing* v. *Parkinson* (1904), 90 L.T., 783; 68 J.P., 353, the defendant, who was prosecuted under Section 6, timeously intimated to the purchaser the name of his seller from whom he had bought with a warranty, a copy of which he sent; that he had sold the butter in the same state as purchased; that at the time he sold the butter he had no reason to believe that it was otherwise; and that he intended to rely on the warranty and the notice in defence. The warranty was as follows: 'We guarantee all butter sold by us to be absolutely pure. Guaranteed pure butter in accordance with the 3rd and 7th Sections of the Margarine Act, 1887.' Held that the notice was good.

[3] The object of this subsection is evidently to prevent the person to whom the warranty was given being prejudiced in his absence, but it does not appear that it is intended that he should appear as a party, or that the court could pronounce any judgment for or against him under the summons before them.

[4] The onus of proving this defence is upon the defendant or respondent.

[5] The enactment in this subsection was rendered necessary by the decision in *Hotchin* v. *Hindmarsh* (1891), 2 Q.B., 181; 65 L.T., 149, where it was held that a warranty given to a master cannot be used in defence by a servant

who is prosecuted for selling an adulterated article under Section 6 of the Act of 1875. The servant must still prove that he had no reason to believe that the article was otherwise than that demanded by the prosecutor, and the onus of proving this will be on him.

[6] This subsection was rendered necessary by the decision in *Reg.* v. *Smith* (1896), 1 Q.B., 596; 74 L.T., 348, where it was held that the person who granted a false warranty can only be prosecuted in the court having jurisdiction in the place where the warranty was given. He can now be prosecuted either in the place where the warranty was given or in the place where the article to which it relates to was purchased.

In *Manners* v. *Tyler* (1902), 1 K.B., 901; 86 L.T., 716, it was held that proceedings for giving a false warranty in respect of an article of food cannot be taken under this section before the court having jurisdiction in the place where the article was purchased for analysis if the warranty was not given within the jurisdiction of that court, unless it was given to the person from whom the article in question was purchased for analysis. The circumstances were these: Manners, in Wiltshire, sold milk to the Great Western and Metropolitan Dairies, Limited, in Middlesex, with a warranty which turned out to be false. The Dairies Company sold it unopened to Dew, a milk-seller at Shepherd's Bush, in the county of London, with a further warranty. Dew's servant, prosecuted under Section 6 of the Act of 1875, set up the warranty from the Dairies Company, and was discharged. Manners was then prosecuted in Middlesex for giving a false warranty, and pled no jurisdiction. The plea was sustained, the court holding that, while this subsection removed the ground of objection which was sustained in *Reg.* v. *Smith, supra*, 'the Legislature did not consider the case of successive warranties, and did not provide for them.'

[7] See Section 17 as to circumstances under which a person convicted of an offence under this section may be imprisoned.

[8] The decision in *Derbyshire* v. *Houliston* (1897), 1 Q.B., 772; 76 L.T., 624 (as to which see note 1 to Section 27 of the Act of 1875, *ante*, p. 280), rendered the provision of Section 27 of the Act of 1875 regarding a false warranty practically inoperative. That provision is accordingly repealed (Section 27 of this Act and schedule), and the above enactment substituted. The effect is that it is no longer necessary for the prosecutor to prove knowledge on the part of the accused of falsity of the statements in the warranty, and that the accused will fall to be convicted unless he prove that he had reason to believe that the statements contained in the warranty were true.

In *Oatley* v. *Lemon* (1905), 92 L.T., 200; 69 J.P., 163, the respondent, a farmer at Sudbury, Derbyshire, contracted with a retail purveyor of milk trading at Holland Road, Kensington, to supply him at Addison Road Railway Station, Kensington, with daily consignments of new milk with all its cream, and gave a written warranty to that effect. When the milk arrived at Addison Road Station it was found to be deficient in fat to the extent of 16 per cent. In a prosecution of the retail dealer under Section 9 of the Act of 1875 it was proved that the milk was part of a consignment supplied by the respondent under the warranty, and the complaint was dismissed. Lemon was thereupon prosecuted under this section for giving a false warranty. He proved to the satisfaction of the magistrate that when he sent the milk off from Sudbury, and up to the time it would be delivered at Addison Road, he had reason to believe the statements contained in the warranty were true. The magistrate dismissed the summons. It was held on appeal that the question was one of fact, and that the magistrate's decision on the facts found proved by him was correct.

In *Kelly* v. *Lonsdale and Company* (1906), 2 K.B., 486; 22 T.L.R., 655, it was held that a written warranty by a foreigner could not be founded on as a

defence to a charge of importing adulterated butter not marked as required by Section 1 (*b*) of this Act, but that such a warranty was only available as a defence to a charge of selling adulterated articles of food.

21. Duty of Court to send Article for Analysis.[1]—The justices or court referred to in Section 22 of the Sale of Food and Drugs Act, 1875, shall on the request of either party under that section cause an article of food or drug to be sent to the Commissioners of Inland Revenue for analysis, and may, if they think fit, do so without any such request.[2]

[1] See Section 22 of Act of 1875, and notes thereon.

[2] Under this section the court had a discretion as to sending the sample to the Government Laboratory for analysis. At the request of either party the sample must now be sent, but in the absence of such a request the court may still exercise this discretion.

22. Provisions as to Certificates of Analysis.—(1) At the hearing of the information in any proceeding under the Sale of Food and Drugs Acts, the production by the defendant of a certificate of analysis by a public analyst in the form prescribed in Section 18 of the Sale of Food and Drugs Act, 1857, shall be sufficient evidence of the facts therein stated, unless the prosecutor requires that the analyst be called as a witness.

(2) A copy of every such certificate shall be sent to the prosecutor at least three clear days before the return day, and if it be not so sent the court may, if it thinks fit, adjourn the hearing on such terms as may seem proper.

This section places the delinquent in the same position as the prosecutor, as to the sufficiency of the evidence of the facts contained in the analyst's certificate produced by the defendant. See notes to Section 21 of the Act of 1875, *ante*, p. 268.

23. Transfer of Power from Secretary for Scotland to Local Government Board.—This Act shall apply to Scotland with the substitution for 'the Local Government Board' of 'the Local Government Board for Scotland,' and all powers and duties vested in or imposed on the Secretary for Scotland in relation to the Sale of Food and Drugs Acts shall be transferred to, vested in, or imposed on the Local Government Board for Scotland.

24. Application to Ireland.—This Act shall apply to Ireland with the substitution for 'the Board of Agriculture' of 'the Department of Agriculture and Technical Instruction for Ireland,' and for the 'Local Government Board' of the 'Local Government Board for Ireland,' and for 'the London and Edinburgh Gazettes' of 'the Dublin Gazette.'

25. Interpretation of Terms.—In this Act, unless the context otherwise requires—

The expression 'margarine-cheese' means any substance, whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk.

The expression 'cheese' means the substance usually known as cheese, containing no fat derived otherwise than from milk.

The expression 'local authority' means any local authority authorized to appoint an analyst for the purposes of the Sale of Food and Drugs Acts, and the expression 'public analyst' means an analyst so appointed.

Other expressions have the same meaning as in the Sale of Food and Drugs Acts, and an offence under this Act shall be treated as an offence under those Acts.

See Act of 1875, Section 33, for meaning of terms in the application of the Acts to Scotland.

26. Definition of 'Food.'—For the purposes of the Sale of Food and Drugs Acts the expression 'food' shall include every article used for food or drink by man, other than drugs or water, and any article which ordinarily enters into or is used in the composition or preparation of human food; and shall also include flavouring matters and condiments.

This section was rendered necessary mainly by the decisions in *James* v. *Jones* (1894), 58 J.P., 230, where it was held that baking-powder consisting of 20 per cent. of bicarbonate of soda, 40 per cent. of ground rice, and 40 per cent. of alum, the last being injurious to health, was not an article of food within the meaning of Section 3 of the Act of 1875; and in *Shortt* v. *Smith* (1895), 11 T.L.R., 325; 59 J.P., 213, where it was held that chewing-gum containing 35 per cent. of paraffin wax, and gum mastic, was not food within the meaning of the same section.

See also *Bennett* v. *Tyler* (1900), 81 L.T., 787; 64 J.P., 119, where it was held that chewing-gum of which paraffin wax was one of the ingredients was not an article of food.

As to water, see Section 70 of the Public Health Act, 1875.

See Act of 1875, Section 2, and notes thereon, also Section 1 of Act of 1907, for definition of 'butter factories' and 'milk-blended butter'; and Section 13 of same Act for new and substituted definition of 'margarine.'

27. Repeal of Enactments in Schedule.—The enactments in the schedule to this Act are hereby repealed to the extent mentioned in the third column of that schedule.

28. Short Title and Commencement.—(1) This Act may be cited as the Sale of Food and Drugs Act, 1899, and the Sale of Food

and Drugs Act, 1875, and the Sale of Food and Drugs Act Amendment Act, 1879, and the Margarine Act, 1887, and this Act may be cited collectively as the Sale of Food and Drugs Acts, 1875 to 1899, and are in this Act referred to as the Sale of Food and Drugs Acts.

(2) This Act shall come into operation on the first day of January, 1900.

SCHEDULE.

ENACTMENTS REPEALED.

Session and Chapter.	Short Title.	Extent of Repeal.
38 & 39 Vict., c. 63.	The Sale of Food and Drugs Act, 1875.	In Section 2, the definition of the term 'food.' In Section 14, the words 'offer to,' and the words 'proceed accordingly and shall.' Section 15. In Section 27 the words from 'Every person who shall give a false warranty in writing' to 'a penalty not exceeding twenty pounds.'
42 & 43 Vict., c. 30.	The Sale of Food and Drugs Act Amendment Act, 1879.	Section 10.
50 & 51 Vict., c. 29.	The Margarine Act, 1887.	In Section 6, the words 'or with,' and the words 'not less than a quarter of an inch square.'
54 & 55 Vict., c. 46.	The Post Office Act, 1891.	Section 11.

THE BUTTER AND MARGARINE ACT, 1907.

(7 *Edw. VII.*, *c.* 21.)

An Act to make further provision with respect to the Manufacture, Importation, and Sale of Butter and Margarine and similar Substances. [*August* 21, 1907.]

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

1. Registration of Factories and Consignments.—(1) The provisions of Section 9 of the Margarine Act, 1887, as amended

by Section 7 of the Sale of Food and Drugs Act, 1899,[1] relating to the registration of manufactories of margarine, shall, with the necessary adaptations, apply to—

(*a*) Butter factories,[2] that is to say, any premises on which by way of trade butter is blended, reworked, or subjected to any other treatment, but not so as to cease to be butter ;[3] and

(*b*) Any premises on which there is manufactured any milk-blended butter[4]—that is to say, any mixture produced by mixing or blending butter with milk or cream (other than condensed milk of cream)[5] or on which there is carried on the business of a wholesale dealer in milk-blended butter.

(2) The provisions of Section 7 of the Sale of Food and Drugs Act, 1899,[6] relating to registers of consignments of margarine, shall, with the necessary adaptations, apply to consignments of milk-blended butter.

(3) Premises shall not be used as a butter factory if they form part of or communicate, otherwise than by a public street or road, with any other premises which are required to be registered under the Sale of Food and Drugs Acts or under paragraph (*b*) of this section, and if any premises are so used the occupier thereof shall be guilty of an offence[7] under this Act, and the local authority shall remove from the register of butter factories kept by them any premises used as a butter factory contrary to this provision :[8]

Provided that this subsection shall not apply to premises which on the first day of January one thousand nine hundred and seven were being used as a butter factory and formed part of or communicated with premises which were then registered under the Sale of Food and Drugs Acts, if and so long as the Board of Agriculture and Fisheries so direct.[9]

The purpose of this section is to make it compulsory to register—
(*a*) Butter factories ;
(*b*) Premises in which milk-blended butter is manufactured ;
(*c*) Premises in which the business of a wholesale dealer in milk-blended butter is carried on ; and
(*d*) All consignments of milk-blended butter ; and to secure this, Section 9 of the Act of 1887, as amended by Section 7 of the Act of 1899, and the latter section itself, are, with the necessary adaptations, made applicable.

[1] *Ante*, p. 316. See Section 2 (5) of this Act, repealing Subsection 2 of Section 7 of Act of 1899.

[2] This definition of butter factories is not intended to include farm-houses and creameries, in which natural butter, as it has been termed (to distinguish it from factory butter or butter blend), is produced (Report of Select Committee on Butter Trade, 1906) ; but obviously a farm-house or creamery may be a factory if any process of blending or reworking of butter is carried on therein. See notes to Section 2, Subsection 3.

[3] See Section 3 of Act of 1887 for definition of butter and margarine, and Section 13 (1) of this Act for new and substituted definition of margarine.

[4] The provisions in this Act as to the substance named in it as milk-blended butter were rendered necessary in consequence of the extensive sale of a substance by that name, consisting of a certain proportion of butter mixed with milk. In *Bayley* v. *Pearks Gunston and Tee, Limited* (1902), 87 L.T., 67 ; 66 J.P., 290, it was held that such a mixture was not margarine according to the definition of that article, and that the sale of it as milk-blended butter was not in contravention of Section 8 of the Act of 1899, although it contained more than 10 per cent. of butter-fat.

In recent years the trade in milk-blended butter has become very extensive. As shown by the evidence submitted to the Select Committee on the Butter Trade, 1906, the composition of the article (which is frequently a mixture of several butters) is such as to open a wide door for defrauding the public. It is made by mixing butter with milk by a mechanical process. The milk may be cream or fresh sweet milk with all its fat, but more frequently it is skimmed or separated milk or water, and the percentage of moisture, it is said, varies from 20 to 40 or even 50 per cent. of the article when ready for sale. A substance of that kind could not be sold as butter, but it was sold with a label describing it as milk-blended butter. There being no limit to the amount of moisture which might be blended with the fatty substance, and no duty to set forth the percentage of it on the label, it is obvious that the business of manufacturing this article might be a very profitable one, and that, for the protection of the public, legislation with regard to it was necessary. Accordingly, in several recent Sessions, Bills were introduced for this purpose, but failed to pass. Some of these contained provisions making the manufacture or sale of such an article entirely illegal, but the Bill which became the present Act was framed on the principle of recognizing milk-blended butter as an article of food which might be lawfully sold. It was conceded that it was not in itself unwholesome or injurious to health, and as it seemed to meet the wants and suit the tastes of certain sections of the community, it was argued that it was unnecessary, and might be a hardship upon those who had been using it, to entirely prohibit the manufacture and sale of it so long as sufficient precautions were taken to prohibit its sale under the name of butter. This view prevailed, and, notwithstanding considerable opposition, the Bill became law, with some important amendments for further protecting the public. Whether the Act does so or not can only be proved by experience of its working.

See Sections 3, 8, and 9 of Act of 1887 and notes thereon (*ante*, pp. 301, 306, 307), and Sections 7 and 8 of the Act of 1899 and notes thereon (*ante*, pp. 316, 317), and Sections 4 and 5 of this Act and notes thereon (*post*, pp. 332, 333).

[5] This is the only definition in the Act of milk-blended butter, and along with it must be read Section 4 (2), which makes it an offence for any person to manufacture, sell, expose for sale, or possess for the purpose of sale, milk-blended butter containing more than 24 per cent. of water.

[6] This, of course, does not include Subsection 2, which is now repealed (Note 1, *supra*). See Section 7 of Act of 1899 and notes thereon (*ante*, p. 316-7).

[7] See Section 4 of Act of 1887, and Section 11 of this Act, for penalties.

[8] The object of this subsection is to prohibit the manufacture of butter in premises in which the manufacture of margarine, margarine cheese, or milk-blended butter is carried on.

[9] The exclusion of existing premises from the operation of this section is only if and so long as the Board may direct.

2. Inspection of Factories.—(1) Any officer of the Board of Agriculture and Fisheries or of the Local Government Board shall have power to enter at all reasonable times any premises registered under the Sale of Food and Drugs Acts or this Act, and to inspect any process of manufacture, blending, reworking, or treatment used therein, and to take samples for analysis of any butter, margarine, margarine-cheese, milk-blended butter,[1] or of any article capable of being used in the manufacture, treatment, or adulteration of any such article as aforesaid.[2]

(2) An officer of a local authority who is authorised to procure samples[3] under the Sale of Food and Drugs Acts shall, if specially authorized in that behalf by the local authority, have the like power of entry, inspection, and sampling as regards any premises registered with the authority as a butter factory.[4]

(3) If the Board of Agriculture and Fisheries have reason to believe—

(*a*) that on any unregistered premises there is carried on any process of manufacture, blending, reworking, or treatment or any wholesale dealing which under the Sale of Food and Drugs Acts or this Act cannot be carried on except on registered premises ; or

(*b*) that on any premises butter is by way of trade either made or stored, and that for the purposes of those Acts inspection is desirable,

the Board may specially authorize any officer of the Board[5] to enter the premises, and in such case the officer shall have the like powers of entry, inspection, and sampling[6] as if the premises were registered.[7]

(4) Where under this section a special authority is required, an officer of the Board or of a local authority shall not be entitled to exercise any of his powers under this section unless, if so requested by or on behalf of the occupier of the premises to be entered, he produces his authority.

(5) Subsection (2) of Section 7 of the Sale of Food and Drugs Act, 1899, is hereby repealed.

[1] For definition of *butter*, see Section 3 of Act of 1887 ; of *margarine*, Section 13 of this Act ; of *margarine-cheese*, Section 25 of Act of 1899 ; and of *milk-blended butter*, Sections 1 (*b*) and 4 of this Act.

[2] This subsection gives power to the officers of the Boards named to enter all registered premises, and to inspect the process of manufacture, etc., and to take samples for analysis of the articles named, or of any article capable of being used in their manufacture, treatment, or adulteration. As to how samples are to be dealt with, see Section 11 (2), which provides that Section 12 of the Act of 1887 (relating to proceedings) shall apply to proceedings under this Act. That section in turn incorporates Sections 12 to 28 of the Act of

1875, which provide as to how samples are to be dealt with, and as to proceedings to be taken in regard to them. Section 33 of that Act should also have been incorporated.

[3] The officers are those named in Section 13 of the Act of 1875.

[4] It will be noted that the power of entry given by this subsection is confined to butter factories. Until special authority is got sanitary inspectors and other officers of a local authority cannot enter a butter factory. See Section 7 of Act of 1899 and notes thereon (*ante*, p. 316). The reason for not giving the officers of local authorities power to enter premises on which milk-blended butter is made was to 'avoid the risk of revealing the trade secrets of these places' (President of Board of Agriculture and Fisheries in House of Commons, April 17, 1907).

[5] The power to order inspection of unregistered premises is conferred only upon the Board of Agriculture and Fisheries, and is only to be exercised when the Board have reason to believe that illegal processes or practices are carried on therein, and the Board's officers can only enter unregistered premises when specially authorized to do so by the Board. This obviously means that the particular premises to be entered must be named in the authority. The authority need only give power to enter. Armed with this power, the officer has the like power of inspecting and sampling as if the premises were registered. See Section 7 of Act of 1899 and notes thereto, particularly case of *Hart* v. *Cohen and Van der Laan* there cited.

[6] See note, *supra*.

[7] This subsection authorizes the entry into farm-houses and creameries, or any premises whatsoever, if there is reason to believe that illegal practices are carried on therein.

3. Prohibition of Adulterants in Butter Factories.—If any substance intended to be used for the adulteration of butter is found in any butter factory, the occupier of the factory shall be guilty of an offence under this Act, and if any oil or fat capable of being so used is found it shall be deemed to be intended to be so used, unless the contrary is proved.

The onus of proving the contrary is upon the occupier of the factory, but he may exempt himself under Section 5 of the Act of 1887, which Section 11 of this Act incorporates. See notes to these sections.

4. Limit of Moisture in Butter, Margarine, and Milk-blended Butter.—(1) If any butter which, when prepared for sale or consignment, contains more than sixteen per cent. of water[1] is in any butter factory, or if any margarine which, when prepared for sale or consignment, contains more than sixteen per cent. of water is in any margarine factory, or if any such butter or margarine is consigned from a butter factory or margarine factory, the occupier of the factor or consignor, as the case may be, shall (whether the excess of moisture is due to adulteration or not) be guilty of an offence under this Act, unless the occupier or consignor proves to the satis-

faction of the court that the butter or margarine was not made, blended, reworked, or treated in the factory.

(2) Any person who manufactures, sells, or exposes or offers for sale, or has in his possession for the purpose of sale, any milk-blended butter which contains more than twenty-four per cent. of water, shall be guilty of an offence under this Act.[2]

[1] See Sale of Butter Regulations, which provide that when water exceeds 16 per cent., it shall be presumed for the purposes of the Acts, until the contrary be proved, that the butter is not genuine by reason of the excessive amount of water therein. This subsection applies to butter and margarine in a factory prepared for sale or consignment. The occupier of the factory or consignor, as the case may be, will be guilty of an offence under this Act if the butter or margarine, when prepared for sale or consignment, contains more than 16 per cent. of water, unless the occupier of the factory or consignor proves that the butter or margarine was not made, blended, reworked, or treated in the factory. The subsection seems to contemplate butter or margarine prepared for sale or consignment being sampled either in the factory or after it has left the factory on consignment (*e.g.*, in transit (Section 8 of Act of 1887), or in possession of a wholesale or retail dealer), or in course of delivery to either (Section 3 of Act of 1879, and Section 14 of Act of 1899) ; but if the article, when sampled after it has left the factory, should contain more than 16 per cent. of water, it does not follow that it contained more than that amount when consigned from the factory. In these circumstances, it may be difficult to obtain a conviction against the consignor, but the retailer of butter can be prosecuted for a contravention of Section 6 of the Act of 1875 and the Butter Regulations, 1902, and the retailer of milk-blended butter for a contravention of Subsection 2 of this section, and Section 9 (3) of this Act.

[2] Butter is defined to mean (Section 3 of Act of 1887) 'the substance usually known as butter made exclusively from milk or cream or both,' and milk-blended butter is defined to mean (Section 1 of this Act) 'any mixture produced by mixing or blending butter with milk or cream.' There is no substance in either article foreign to milk, which, when genuine, contains a slightly varying but fairly constant percentage of water.

By Subsection 1 of this section it is made an offence to manufacture or consign for sale butter containing more than 16 per cent. of water ; and by Subsection 2 it is made an offence to manufacture, sell or expose for sale, or possess for the purpose of sale, any milk-blended butter which contains more than 24 per cent. of water. The result is that, when an article made exclusively from milk or cream, or both, contains more than 16 per cent. of water, it ceases to be butter, and becomes milk-blended butter ; and when it contains more than 24 per cent. of water, it ceases to be milk-blended butter, and is an unlawful article of commerce.

5. Provisions as to the Importation of Butter, Margarine, and Milk-blended Butter.—(1) There shall be included in the list of articles importation of which is made an offence by Section 1 of the Sale of Food and Drugs Act, 1899,[1] the following articles :

(*e*) Butter containing more than sixteen per cent. of water ;
(*f*) Margarine containing more than sixteen per cent. of water, or more than ten per cent. of butter-fat ;[2]

(*g*) Milk-blended butter containing more than twenty-four per cent. of water ;

(*h*) Milk-blended butter, except in packages conspicuously marked[3] with such name as may be approved by the Board of Agriculture and Fisheries for the purpose ;

(*j*) Butter, margarine, or milk-blended butter which contains a preservative prohibited by any regulation made under this Act, or an amount of a preservative in excess of the limit allowed by any such regulation ;[4]

and in the said section the words 'adulterated or impoverished butter (other than margarine) or' and the words 'butter or' shall be repealed.

(2) The maximum fine for an offence under the said Section 1, as amended by this section, shall, where the article in respect of which the offence was committed is butter, margarine, margarine-cheese, or milk-blended butter, be either such as is provided in the said Section 1, or, at the election of the Commissioners of Customs,[5] a fine equal to the value of the goods imported bearing the same mark or description, to be estimated and taken according to the rate and price for which goods of the like kind but of the best quality were sold at or about the time of the importation.

(3) In any proceeding under the said Section 1 as amended by this section the certificate of the principal chemist of the Government Laboratories, or, if the person who made the analysis be called as a witness, the evidence of that person, that an imported substance is margarine or milk-blended butter shall raise a presumption, until the contrary is proved, that the substance is margarine or milk-blended butter, and the defendant shall not be entitled to require the person who made the analysis to be called as a witness unless he shall, at least three clear days before the return day, give notice to the prosecutor that he requires his attendance, and deposit with the prosecutor a sum sufficient to cover the reasonable costs and expenses of his attendance, which costs and expenses shall be paid by the defendant in the event of his conviction.[6]

(4) Where a sample taken under the said Section 1 as amended by this section is certified by the principal chemist to be margarine or milk-blended butter the Commissioners of Customs shall upon receiving the certificate forthwith notify the importer thereof.[7]

[1] The articles mentioned in Subsection 1 of the Act of 1899 are :
(*a*) Margarine or margarine cheese ;
(*b*) Adulterated or impoverished butter (other than margarine or adulterated or impoverished milk or cream) ;
(*c*) Condensed, separated or skimmed milk ;
(*d*) Any adulterated or impoverished article of food to which the section may be applied by order in council.
To this list the five articles mentioned in this subsection are added. The addition of the first three was the necessary result of the provisions in Section 4.

The repeal of the words 'adulterated or impoverished butter (other than margarine) or' and the words 'butter or' in Subsection 1 (*b*) of Section 1 of the Act of 1899 limits the application of that subsection to 'adulterated or impoverished milk or cream.'

[2] Section 8 of the Act of 1899 makes it an offence to manufacture, sell, or expose for sale, or import, any margarine, 'the fat of which contains more than 10 per cent. of butter-fat.' This seems a different provision, and means that the whole composition of margarine—viz., fat, water, and all—must not contain more than 10 per cent. of butter-fat.

[3] The mark must be on the package, and the mark thereon must be the name approved by the Board.

[4] See Section 7, *infra*, as to the making of regulations.

[5] The power of election applies only to the four articles named. See Section 1 (1) of the Act of 1899 for penalties (*ante*, p. 310).

[6] This subsection supplements Section 1 (5) of the Act of 1899, which provides that the certificate of the principal chemist shall be sufficient evidence of the facts stated therein, unless the department requires the person who made the analysis to be called as a witness. This subsection goes further, and provides that such certificate or the evidence of the person who made the analysis, if he be called as a witness, if it relates to imported margarine or milk-blended butter, shall raise a presumption that the substance is margarine or milk-blended butter, and lays the onus of proving the contrary upon the defendant; and if the defendant requires the person who made the analysis to attend the court, which he is entitled to do by Section 1 (5) of the Act of 1899, he must not only give the prosecutor three days' notice, but must deposit a sum to cover the cost and expense of the analyst's attendance.

[7] See Section 1 (2) of Act of 1899 for definition of importer.

6. Regulations as to Milk-Solids in Butter.—The power of making regulations under Section 4 of the Sale of Food and Drugs Act, 1899, shall extend to making regulations as to the proportion of any milk-solid other than milk-fat in any sample of butter or milk-blended butter.

The object of this section is to give the Board of Agriculture and Fisheries power to make regulations to prevent the adulteration of butter or milk-blended butter by the addition thereto of curd or milk-solids other than fat.

7. Regulations as to Preservatives.[1]—(1) The Local Government Board may, after such inquiry as they deem necessary, make regulations for prohibiting the use as a preservative of any substance specified in such regulations in the manufacture or preparation for sale of butter, margarine, or milk-blended butter, or for limiting the extent to which, either generally or as regards any particular substance or substances, preservatives may be used in the manufacture or preparation for sale of butter, margarine, or milk-blended butter.

(2) Any regulations made under this section shall be notified in the London, Edinburgh, or Dublin Gazette as the case may require, and shall also be made known in such other manner as the Local Government Board may direct.

(3) Any person who manufactures, sells, or exposes or offers for sale,[2] or has in his possession for the purpose of sale, any butter, margarine, or milk-blended butter which contains a preservative prohibited by a regulation under this section or an amount of a preservative in excess of the limit allowed by any such regulation, shall be guilty of an offence under this Act.

[1] See Section 3 of Act of 1875 and notes thereon. This section carries out a recommendation of the Butter Committee of 1906, who state : 'It does not appear that the trade in butter is unsatisfactory in this respect, but it does not seem that there are any adequate means in the present state of the law of checking any abuse in preservatives that may arise.'

[2] See notes to Sections 6 and 7 of the Act of 1887 (*ante*, pp. 304-306).

8. Marking of Wrappers, etc., used in Connection with Margarine.—If in any wrapper enclosing margarine, or on any package containing margarine, or on any label attached to a parcel of margarine, or in any advertisement or invoice of margarine a person dealing in margarine describes it by any name other than either 'margarine,' or a name combining the word 'margarine' with a fancy or other descriptive name approved by the Board of Agriculture and Fisheries and printed in type not larger than and in the same colour as the word 'margarine,' he shall be guilty of an offence under this Act.

See Section 6 of Act of 1887 and notes thereon ; also Section 6 of Act of 1899, where 'package' is used in connection with articles sold by wholesale, and 'parcel,' 'label' and 'wrapper' in connection with sales by retail. Section 6 (2) of the Act of 1899 prohibits other printed matter from appearing on the wrapper. This section modifies that prohibition by allowing a fancy or descriptive name approved by the Board to be combined with margarine, provided it is printed in type not larger than, and of the same colour as, the word 'margarine.' It will be competent for every manufacturer of margarine to obtain the approval of a name for his own product, and to register the name as a trade mark ; but Section 10 provides that the approved name must not be suggestive of butter or the dairy interest.

See notes to Sections 3 and 6 of Act of 1887.

9. Regulation of Sale of Milk-blended Butter.—(1) Milk-blended butter shall be dealt with under such name or names[1] as may be approved by the Board of Agriculture and Fisheries and under the conditions applicable to the sale or description of margarine,[2] with the substitution of an approved name for the word 'margarine,' and with this modification, that, in any case where, in order to comply with those conditions, the article is delivered

to the purchaser in a wrapper, there shall, in addition to the approved name, be printed on the wrapper in such manner as the Board approve such description of the article, setting out the percentage of moisture or water contained therein,[3] as may be approved by the Board.

(2) Milk-blended butter, whenever forwarded by any public conveyance, shall be duly consigned under the name which, as respects the article consigned, has been approved by the Board under this section; subject to this modification, Section 8 of the Margarine Act, 1887, shall apply to milk-blended butter in like manner as it applies to margarine.

(3) If any person deals with, sells, or exposes or offers for sale, or has in his possession for the purpose of sale, or describes any milk-blended butter contrary to the provisions of this section, he shall be guilty of an offence under this Act, but any defence which would be a defence under Section 7 of the Margarine Act, 1887, as respects margarine, shall be a defence under this section as respects milk-blended butter.[4]

[1] It was made clear from the discussion of the Bill in Committee that each manufacturer might apply for the approval of a name for his own product, and that it was not intended that the Board should approve of one general name for all milk-blended butter.

[2] This seems to read into this section the provisions of the Acts of 1887 and 1899 applicable to the sale or description of margarine. As to whether Section 10 of the Act of 1899 is applicable, see note 1 to that section (p. 318). See also notes to Section 8 of Act of 1887 (pp. 306-7).

[3] It is only necessary that the percentage should be printed on the 'wrapper'—that is to say, when the article is sold by retail. It is not necessary to print it on packages which are the receptacles for wholesale quantities. This part of the modification clause was introduced in the Committee of the House of Commons. It necessitates the printing upon the wrapper, not only the approved name, but also such description of the article as the Board may approve, setting out the percentages of moisture or water contained in the article. This is a most valuable provision for protecting the public, and might well be followed with reference to other mixed articles of food sold under the protection of a label, such as coffee and chicory.

[4] This subsection is a repetition of the first part of Section 7 of the Act of 1887, with the necessary addition of the words 'or describes any milk-blended butter contrary to the provision of this section.' The defence referred to is proof of purchase, with written warranty or invoice. See Section 25 of Act of 1875; Section 7 of Act of 1887; and Section 20 of Act of 1899, and notes to these sections.

10. Names of Margarine, etc.—A name shall not be approved by the Board of Agriculture and Fisheries for use in connexion with margarine if it refers to or is suggestive of butter or anything connected with the dairy interest, nor shall such a name be approved

as a name under which milk-blended butter may be imported or dealt with.

This section refers to the fancy or descriptive name which, under Section 8, may, with the approval of the Board, be combined with margarine, and to the name or names which, by Section 9, are to be approved by the Board for milk-blended butter.

11. Penalties[1] for Offences.—(1) Any person guilty of an offence under this Act shall be liable on conviction under the Summary Jurisdiction Acts for a first offence to a fine not exceeding twenty pounds and for a second offence to a fine not exceeding fifty pounds and for a third or any subsequent offence to a fine not exceeding one hundred pounds, and in cases where imprisonment can be inflicted under Section 17 of the Sale of Food and Drugs Act, 1899, to such imprisonment as is by that section authorized.

(2) Section 5 of the Margarine Act, 1887[2] (which exempts employers from liability in certain cases), and Section 11 of the same Act (which relates to the appropriation of penalties),[3] and Section 12 of the same Act (which relates to proceedings under that Act), shall apply to proceedings under this Act,[4] with the substitution of references to this Act for references to the Margarine Act, 1887.

[1] The penalties are those imposed by Section 4 of the Act of 1887, and they are subject to the provisions of Section 17 of the Act of 1899, by which, in certain circumstances, a person found guilty of certain offences is liable to imprisonment. As to other penalties, see Sections 3, 6, 9, and 17 of the Act of 1875; Section 4 of the Act of 1879; Sections 1, 9, 11, and 16 of the Act of 1899; and Section 5 (2) of this Act.

[2] Section 5 of the Act of 1887 entitles an employer who is charged with an offence to bring before the court another person whom he charges as the actual offender, and to have him convicted, but the employer must first satisfy the court that he had used due diligence to enforce the execution of the Act, and that the offence had been committed by the person charged without his knowledge, consent, or connivance.
See notes to Sections 6 and 7 of the Act of 1887 (*ante*; pp. 304-306).

[3] *Ante*, p. 308. See also Sections 26 and 33 of the Act of 1875.

[4] This reads into this Act Sections 12 to 28 of the Act of 1875 as to proceedings so far as not varied by the Act of 1887, and officers employed under the Act of 1875 are required to carry out the provisions of this Act.

12. Amendment of Section 8 of Margarine Act, 1887.—Except in the Administrative County of London, Section 8 of the Margarine Act, 1887, shall have effect as if the words 'inspector of weights and measures' were inserted after the word 'nuisances.'[1]

[1] *Ante*, p. 306.

13. Definition of Margarine.—(1) For the purposes of the Sale of Food and Drugs Acts and this Act the expression 'margarine' shall mean any article of food, whether mixed with butter or not, which resembles butter and is not milk-blended butter.

(2) The above definition shall be substituted for the definition of margarine in the Margarine Act, 1887.

See Section 3 of Act of 1887 and notes thereon (*ante*, p. 301); Section 8 of the Act of 1899 and notes thereon (*ante*, p. 317); and Sections 4 and 5 of this Act and notes thereon (*ante*, pp. 333-335).

14. Short Title, Construction, and Commencement.—(1) This Act may be cited as the Butter and Margarine Act, 1907, and shall be construed as one with the Sale of Food and Drugs Act, 1899, and may be cited with the Sale of Food and Drugs Acts as the Sale of Food and Drugs Acts, 1875 to 1907.

(2) This Act shall come into operation on the first day of January one thousand nine hundred and eight.

PUBLIC HEALTH (REGULATIONS AS TO FOOD) ACT, 1907.

(*7 Edw. VII., c.* 32.)

An Act to enable regulations to be made for the prevention of danger arising to public health from the importation, preparation, storage, and distribution of articles of food (*August* 28, 1907).

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. Power to make Regulations as to the Importation, Preparation, Storage, and Distribution of Articles of Food.—(1) The power of making regulations under the Public Health Act, 1896, 59 and 60 Vict., c. 19, and the enactments mentioned in that Act, shall include the power of making regulations authorizing measures to be taken for the prevention of danger arising to public health from the importation, preparation, storage, and distribution of articles of food or drink (other than drugs or water) intended for sale for human consumption, and, without

prejudice to the generality of the powers so conferred, the regulations may—

(*a*) Provide for the examination and taking of samples of any such articles ;

(*b*) Apply as respects any matters to be dealt with by the regulations, any provision in any Act of Parliament dealing with the like matters, with the necessary modifications and adaptations ;

(*c*) Provide for the recovery of any charges authorized to be made by the regulations for the purposes of the regulations or any services performed thereunder.

(2) For the purposes of regulations made under this Act, articles commonly used for the food or drink of man shall be deemed to be intended for sale for human consumption unless the contrary is proved.

(3) In the application of this Act to Scotland, Part IV. of the Public Health (Scotland) Act, 1897 (60 and 61 Vict., c. 38), shall be substituted for the Public Health Act, 1896.

2. Publication of Regulations.—All regulations made under this Act shall be laid as soon as may be before Parliament, and the Rules Publication Act, 1893 (56 and 57 Vict., c. 66), shall apply to such regulations as if they were statutory rules within the meaning of Section 1 of that Act, and that Act as so applied shall, notwithstanding anything in Subsection 5 of Section 1 thereof, extend to Scotland, with the substitution of a reference to the *Edinburgh Gazette* for the reference to the *London Gazette*.

3. Short Title.—This Act may be cited as the Public Health (Regulations as to Food) Act, 1907.

The short but comprehensive Act gives the Local Government Board power to make regulations for the prevention of danger to public health from the importation, preparation, storage, and distribution of articles of food intended for sale for human consumption. The existing law empowers medical officers, sanitary inspectors, and veterinary surgeons to seize and procure the condemnation of articles of food which are diseased, unsound, or unfit for the food of man, where such articles are exposed for sale or deposited in any place, or are in course of transmission for the purpose of sale or of preparation for sale ; but in practice it has been found that it gives no power, or insufficient power, to seize articles of food intended for sale for human consumption, and which at the time may not be in one or other of the above positions, and that the powers of inspection and regulation of premises in which certain articles of food are prepared and stored, and of the receptacles and means of transport in and by which food is distributed, are altogether inadequate. The enormous importation of food into the United Kingdom, much of it in tins, the recent scandals connected with that trade, the state of the premises in which and

the conditions under which certain articles of food are prepared and distributed in this country, as revealed in the discussions on the Bill in the House of Commons, render it necessary that the Local Government Board and Local Authorities should be armed with fuller powers of inspection and regulation.

No regulations have yet been issued by the Local Government Board, but the following extract from the speech of the President of the Board in the House of Commons on August 2, 1907, on the second reading of the Bill, indicates the intention of the Board as to their purpose and scope: 'The Local Government Board,' said Mr. Burns, 'desire power under this Bill to prevent danger arising to the public health from the importation of tinned foods. . . . The regulations would also require satisfactory evidence of the antecedents of the food, as is demanded by Germany, Denmark, and other Continental countries. The authorities would insist upon knowing the conditions under which food was prepared, especially sausages, brawn, and other articles consumed mainly in the poorer districts. It would insist upon the provision of clean and decent places where food had to be stored. It would provide, for example, that ice-cream in process of preservation should not be kept under or in a bed or near a lavatory. It would insist that in the process of distributing food the receptacles, wagons, and other means of transport should be kept cleaner than they now were. It would enable many of the abominations which prevail in all parts of the country to be stopped, and, indeed, the conditions under which food was prepared and distributed would be so improved as to be an aid to the food trade, while conferring a protection upon the honest traders in the difficulties which now surround them.'

The interests of traders and manufacturers are sufficiently safeguarded by Section 2, providing that regulations made under the Act should be laid as soon as may be before Parliament, and for the Rules Publication Act, 1893, being made applicable to them. That means that the proposed regulations must not only be laid before Parliament, but that notice of the proposal to make them must be advertised in the London, Edinburgh, and Dublin Gazettes (if applicable to all parts of the United Kingdom) at least forty days before the regulations are made, and that during that period any public body may obtain copies of them, that any representations or suggestions made by any public body in writing to the Local Government Board shall be taken into consideration before the regulations are finally settled, and that on the expiration of the forty days the regulations may be made either as originally prepared or as amended by the Board, and shall come into operation forthwith, or at such time as may be prescribed by the regulations.

SALE OF HORSEFLESH, ETC., REGULATION ACT, 1889.

Signs on Horseflesh Shops.

1. No person shall sell, offer, expose, or keep for sale any horseflesh for human food elsewhere than in a shop, stall, or place over or upon which there shall be at all times painted, posted, or placed in legible characters of not less than four inches in length, and in a conspicuous position, and so as to be visible throughout the whole time, whether by night or by day, during which such horseflesh is being offered or exposed for sale, words indicating that horseflesh is sold there.

Horseflesh not to be sold as other Meat.

2. No person shall supply horseflesh for human food to any purchaser who has asked to be supplied with some meat other than horseflesh, or with some compound article of food which is not ordinarily made of horseflesh.

Power of Medical Officer of Health to inspect Meat, etc.

3. Any medical officer of health, or inspector of nuisances, or other officer of a local authority acting on the instructions of such authority or appointed by such authority for the purposes of this Act, may at all reasonable times inspect and examine any meat which he has reason to believe to be horseflesh, exposed for sale or deposited for the purpose of sale, or of preparation for sale, and intended for human food, in any place other than such shop, stall, or place as aforesaid, and if such meat appears to him to be horseflesh he may seize and carry away, or cause to be seized and carried away, the same, in order to have the same dealt with by a justice as hereinafter provided.

Power of Justice to grant Warrant for Search.

4. On complaint made on oath by a medical officer of health, or inspector of nuisances, or other officer of a local authority, any

justice may grant a warrant to any such officer to enter any building or part of a building other than such shop, stall, or place as aforesaid, in which such officer has reason for believing that there is kept or concealed any horseflesh which is intended for sale, or for preparation for sale, for human food, contrary to the provisions of this Act, and to search for, seize, and carry away, or cause to be seized and carried away, any meat that appears to such officer to be such horseflesh, in order to have the same dealt with by a justice as hereinafter provided.

Any person who shall obstruct any such officer in the performance of his duty under this Act shall be deemed to have committed an offence under this Act.

Power of Justice with Reference to Disposal of Horseflesh.

5. If it appears to any justice that any meat seized under the foregoing provisions of this Act is such horseflesh as aforesaid, he may make such order with regard to the disposal thereof as he may think desirable ; and the person in whose possession or on whose premises the meat was found shall be deemed to have committed an offence under this Act, unless he proves that such meat was not intended for human food contrary to the provisions of this Act.

Penalty.

6. Any person offending against any of the provisions of this Act, for every such offence shall be liable to a penalty not exceeding twenty pounds, to be recovered in a summary manner ; and if any horseflesh is proved to have been exposed for sale to the public in any shop, stall, or eating-house other than such shop, stall, or place as in the first section mentioned, without anything to show that it was not intended for sale for human food, the onus of proving that it was not so intended shall rest upon the person exposing it for sale.

Definition of 'Horseflesh.'

7. For the purposes of this Act 'horseflesh' shall include the flesh of asses and mules, and shall mean horseflesh, cooked or uncooked, alone or accompanied by or mixed with any other substance.

Local Authorities for Purposes of Act.

8. For the purposes of this Act the local authorities shall be, in the City of London and liberties thereof, the Commissioners of Sewers, and in other parts of the county of London the vestries and district boards acting in the execution of the Metropolis Local

Management Acts, and in other parts of England the urban and rural sanitary authorities, and in Ireland the urban and rural sanitary authorities under the Public Health (Ireland) Act, 1878.

Application to Scotland.

9. In the application of this Act to Scotland the expression 'justice' shall include sheriff and sheriff substitute, and the expression 'local authority' shall mean any local authority authorized to appoint a public analyst under the Sale of Food and Drugs Act, 1875, and the procedure for the enforcement of this Act shall be in the manner provided in the thirty-third section of the said Sale of Food and Drugs Act, 1875.

Short Title.

10. This Act shall be cited as the Sale of Horseflesh, etc. Regulation Act, 1889.

Commencement of Act.

11. This Act shall come into operation on the twenty-ninth day of September, one thousand eight hundred and eighty-nine.

THE ANTHRAX ORDER, 1899.

THE following is a summary of the above-named Order, which is applicable to Great Britain and Ireland :

'Animals' includes cattle, sheep, goats, all ruminating animals and swine, horses, asses, and mules.

'Disease' means anthrax, and 'diseased animal' means an animal affected or suspected of anthrax.

'Carcass' means the carcass of an animal, and includes part of a carcass, and the meat, flesh, bones, hide, skins, hoofs, horns, offal, or other part of an animal, separately, or otherwise of any portion thereof.

1. Every person possessing or having had in his possession or under his charge an affected or suspected animal shall at once inform a police constable in the area where the animal is or was. The constable shall at once inform an inspector of the local authority, who must report to the local authority. The inspector of the local authority must report to the medical officer of health of the sanitary district in which the animal is or was.

2. The inspector of the local authority shall act with all haste when he is informed or suspects the existence of the disease. He then shall put into operation his powers under this Act as well as those of the Diseases of Animals Act, 1894.

3. (1) The local authority forthwith, on being informed of the existence of the disease, must institute inquiries as to the correctness of the information with the assistance of a veterinary inspector.

(2) The owner and occupier of the infected or suspected premises must give all assistance.

4. Milk from diseased or suspected animals must not be removed from the building or other place where the animal is or was.

5. No animal shall be moved out of any infected or suspected shed or field till the veterinary inspector is satisfied that all the

animals therein are free from infection, and that the premises have been disinfected. Exception is made in the case of horses, asses, and mules, and animals removed for immediate slaughter, or under the supervision of the veterinary inspector, to a place of detention, where they are to be kept for seven days.

6. No dung, litter, fodder, etc., or any article which has been at all in contact with a diseased animal, is to be removed, except to a place fixed by the local authority, where it can be burned, disinfected, or buried. The burial should be carried out in a place to which animals will not have access.

7. (1) The local authority must dispose of the carcass of any diseased or suspected animal, and may do so in either of the following ways :

(*a*) *Burial.*—The carcass may be removed as soon as possible in its skin to a suitable place into which no animal has access, and which is removed from a dwelling-house and from all risk of contaminating any well or water-supply. Here it shall be buried at a depth of not less than six feet below the surface of the earth, and with a layer of lime not less than one foot thick both beneath and above it.

(*b*) *Destruction.*—If they have a licence from the Board of Agriculture, the local authority may cause the carcass to be destroyed by heat or chemical agents, after it has been taken, in charge of an officer of the local authority, to a horse-slaughterer's or knacker's yard or other suitable place for the purpose.

(2) No carcass is to be buried or destroyed save by the local authority, or removed from the place where the death occurred or the animal was slaughtered, except for the purpose of burial or destruction by the local authority.

(3) Before removal all the natural openings in the carcass should be plugged with tow, soaked in pure carbolic acid or other disinfectant. The skin should not be cut, and nothing should be done to cause effusion of blood, except by or under the supervision of the veterinary inspector, and so far as is necessary for the purposes of microscopical examination.

(4) A local authority may cause or allow a carcass to be taken to the district of another local authority for burial or destruction, provided the latter give consent.

8. A carcass can only be exhumed with the consent of the Board of Agriculture or the veterinary inspector.

9. (1) The following must be disinfected at the cost of the local authority under the direction of an inspector :

(*a*) Every part of any shed, stable, building, field, etc., in which a diseased animal has died or has been slaughtered or kept at the date of death or slaughter.

(*b*) Every utensil, pen, hurdle, or other thing used for or about the animal.

(*c*) Every van, cart, or other vehicle used for conveying the animal on land otherwise than on a railway.

(2) The shed etc., should be sprinkled with freshly burned lime or other suitable disinfectant, and then thoroughly swept out. All dung, litter, broken fodder, etc., which has been at all in contact with the animal must be removed. The floor and all other parts of the shed, etc., with which the diseased animal or its droppings, or any discharge from its nostrils, etc., has come in contact should be thoroughly washed or scrubbed or scoured with hot water. These parts should afterwards be washed down with lime-wash, to every gallon of which is added just before use 4 ounces of chloride of lime or $\frac{1}{2}$ pint of commercial carbolic acid. Alternatively, other suitable disinfectants may be employed. A field or other place which cannot be so treated must be disinfected as the local authority or veterinary inspector think fit.

(3) Utensils, pens, hurdles, etc., and vans, carts, etc., must be thoroughly scraped, and all litter, dung, sawdust, etc., must be removed. The articles mentioned should then be washed or scrubbed or scoured with hot water, and washed with lime-wash as above.

(4) Dung, litter, broken fodder, etc., must be forthwith burned, or destroyed or disinfected, and buried to the satisfaction of the local authority or veterinary inspector.

10. The owner must under penalty afford facilities for disinfection.

11. Prohibits the exposure of diseased and suspected animals in markets or fairs, the keeping or grazing of such animals on unfenced land, and the movement of such animals from place to place, except with the consent of the veterinary inspector.

15. As long as the disease exists the veterinary inspector must make a weekly report to the local authority.

35. Every local authority must appoint at least one duly qualified veterinary inspector to execute the provisions of the Act.

36. The local authority and its inspectors must send such notices and reports to the Board of Agriculture as are called for.

43. The police are empowered to enforce this Act and any orders and regulations made by the Board of Agriculture.

56. Animals landed contrary to the provisions of this Act shall be forfeited.

57. Any person contravening this Order to escape conviction must prove to the satisfaction of the local authority that he did not know and could not have known that the disease existed. The same applies with reference to disinfection of premises.

APPENDIX

SALE OF BUTTER REGULATIONS, 1902.

THE Board of Agriculture, in exercise of the powers conferred on them by Section 4 of the Sale of Food and Drugs Act, 1899, do hereby make the following Regulations :

1. Where the proportion of water in a sample of butter exceeds 16 per cent. it shall be presumed for the purposes of the Sale of Food and Drugs Acts, 1875 to 1899, until the contrary is proved, that the butter is not genuine by reason of the excessive amount of water therein.

2. These Regulations extend to Great Britain.

3. These Regulations shall come into operation on the fifteenth day of May, One thousand nine hundred and two.

4. These Regulations may be cited as the Sale of Butter Regulations, 1902.

In witness whereof the Board of Agriculture have hereunto set their Official Seal this Twenty-second day of April, One thousand nine hundred and two.

T. H. ELLIOTT,
Secretary.

(L.S.)

BOARD OF AGRICULTURE.

The Sale of Butter Regulations relating to Ireland, dated April 23, 1902, are in terms identical to the above.

ADDENDUM.

To be read as part of note 2 to Section 25, p. 278.

In *Hargreaves* v. *Spackman* (1907), 24 T.L.R., 173, a new point as to warranty was raised. The respondent was charged with a contravention of Section 9 of the Act of 1875, by unlawfully selling to the prosecutor, an inspector, milk from which 23 per cent. of fat had been abstracted. The respondent, in October, 1906, entered into a contract with the Dairy Supply

Company, Limited, for the supply of a specified quantity daily ' of genuine milk as received from farmers.' The agreement continued : ' It is fully understood that this agreement is for milk as received from the farmers, that no warranty is hereby implied, and that the buyer must satisfy himself of its quality before it is accepted by him.' It was part of the arrangement that the milk should be sent direct to the respondent by a farmer named Golding of Fullerton, Hampshire, by consignment under warranty from Fullerton, and this arrangement was carried out ; and the sample taken from the respondent was from a churn so received to which was attached a label on which were these words : ' To Dairy Supply Coy., Limited, Museum Street, London. Evening train ; Feby. 10, 1907. One churn, No. 800, containing 8 gallons. Warranted pure new milk with all its cream and free from preservative. Delivered under contract. T. Golding.' It was found proved that the respondent had no reason to suppose that the milk was otherwise than of the same nature, substance, and quality as that demanded by the appellant, and that he sold it in the same state as when he purchased it. The respondent relied on the warranty as a defence under Section 25 of the Act of 1875. The justices were of opinion that the respondent had purchased the milk as the same in nature, substance, and quality as that demanded of him, and with a written warranty, and dismissed the information. An appeal by the prosecutor was allowed (Channell, Bray, and Sutton, JJ.). Mr. Justice Channell, in giving judgment, said that the case raised rather a fine point, but they were all of opinion that the appeal must be allowed. The respondent had got a churn of milk from Golding which he believed, and had every reason to believe, was good milk, and all the facts necessary to establish his defence had been found in his favour except one—namely, that he had received no warranty in writing from his vendor. The warranty to be available must be something from the vendor to him. In the present case the respondent got no warranty from his vendor. He thought that in a general way ' warranty ' referred to a warranty from the vendor. But he thought that if there was a written warranty from the Supply Company to the middleman, and that by written agreement between the middleman and the respondent the benefit of that warranty had been transferred to the latter, he would have a good defence under Section 25. That was his present idea, but it was not necessary to decide the point. But here it seemed quite clear that the respondent was not given the benefit of the warranty which the Supply Company got from their consignor. The special case, indeed, stated that it was part of the arrangement that the respondent was to get the milk from Golding ' under warranty,' but that arrangement was not in writing. Then it was contended by the respondent that the label in itself was a warranty ; but on its face it was only a warranty to the Supply Company. It seemed to him that, in order to raise the defence given by Section 25, the respondent must get a warranty from his vendor, and get it in writing. The appeal must be allowed.

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SCOTCH REPORTS.

I. Court of Session.

D.	Dunlop's (Second Series).
R.	Rettie's (Fourth Series, 1873-1898).
F.	Fraser's (Fifth Series, 1899-1906).
S.C.	Session Cases (Sixth Series, from 1906-1907).
R.(J.)	Rettie's (Justiciary Cases).
F.(J.)	Fraser's (Justiciary Cases).
S.C.(J.)	Session Cases (Sixth Series, Justiciary Cases).
S.L.T.	Scots Law Times (Current).
S.L.R.	Scottish Law Reporter (Current).
C.	Couper's Justiciary Cases (1868-1885).
W.	White's Justiciary Cases, 1885-1893).
A.	Adam's Justiciary Cases (from 1893).

II. Sheriff Court.

S.L.Rev.	Scottish Law Review (from 1885).

ENGLISH REPORTS.

L.R.Ex.	Law Reports, Exchequer (Old Series).
Ex.D.	Exchequer Division (New Series).
L.R.Q.B.	Law Reports, Queen's Bench (Old Series).
Q.B.D.	Law Reports, Queen's Bench Division.
Q.B.	Law Reports, Queen's Bench (New Series).
K.B.	Law Reports, King's Bench (New Series).
L.T.	Law Times Reports.
T.L.R.	*Times* Law Reports.
J.P.	Justice of the Peace Cases.
M. and S.	Maule and Selwyn.
R.R.	Revised Reports.
Camp.	Campbell's Reports.
B. and S.	Best and Smith.
L.G.R.	Local Government Reports.
Sol.J.	Solicitors' Journal.
L.J.M.C.	Law Journal, Magistrates' Cases.
W.R.	Weekly Reporter.
F. and F.	Foster and Finlason.
L. and C.	Leigh and Cave.

IRISH REPORTS.

Ir.L.T.	Law Times (Irish).
Ir.R.	Irish Reports.

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DIGEST

OF

Regulations Governing Meat Inspection in the United States

BY

MAXIMILIAN HERZOG, M. D.

Professor of General and Comparative Pathology in the Chicago Veterinary College; Pathologist to the Michael Reese Hospital; Expert of the Chicago Stock Yards Investigation Commission of the Illinois Manufacturers and the Chicago Commercial Associations; Late Pathologist to the Bureau of Science, Manila, Philippine Islands

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REGULATIONS GOVERNING MEAT INSPECTION IN THE UNITED STATES.

BY MAXIMILIAN HERZOG, M. D., CHICAGO,

Professor of General and Comparative Pathology in the Chicago Veterinary College; Pathologist to the Michael Reese Hospital; Expert of the Chicago Stockyards Investigating Commission of the Illinois Manufacturers and the Chicago Commercial Association; late Pathologist in the Bureau of Science, Manila, P. I.

There is no country in the world which prepares so large an amount of meat and meat products for interstate and foreign commerce as do the United States. For a number of years the Federal Government has by provisions of law regulated the slaughtering of animals whose meats and meat products were intended for interstate and foreign traffic. The meat inspection law, as is well known, has been much extended and its provisions have been made much more severe in 1906, so that this law to-day is probably as stringent as the meat inspection provisions of any country, and more stringent than the laws in many countries. Compliance with the provisions of the law is enforced by a large, well-trained corps of veterinary inspectors of the Bureau of Animal Industries.

Besides, the meat and meat products are subject to the provisions of the federal laws concerning food adulteration in general. Hence the meats and meat products prepared for interstate and foreign commerce by the large stockyards concerns in various parts of the United States are not only almost without exception wholesome and proper for food, but of a stand-

ard which may well compete with meats and meat products from any part of the world.

Meat inspection in the United States, of slaughtering, packing, meat canning, salting, rendering, or similar establishments whose meats or meat food products, in whole or in part, enter into interstate or foreign commerce, is regulated by Acts of Congress and by regulations issued by the Department of Agriculture.[1] The inspection is carried out by officers of the Bureau of Animal Industry.

The regulations as to **sanitary conditions** in slaughtering houses, etc., provide that the establishments in which the animals are slaughtered or the meats and meat food products are prepared, cured, packed, stored or handled, shall be suitably lighted and ventilated, and maintained in a sanitary condition. Ceilings, side walls, pillars, etc., shall be frequently whitewashed or painted, or where this is impracticable they shall when necessary be washed, scraped or otherwise rendered sanitary. The aprons, smocks or other outer clothing of employes who handle meat must be of a material that is readily cleansed daily. Employes are required to keep their hands clean. All toilet rooms, urinals and dressing rooms must be entirely separated from compartments in which carcasses are dressed, and they must be fitted with modern lavatory accommodations and be properly lighted and ventilated; all rooms where employes work must be provided with cuspidors. Persons affected with tuberculosis or any other communicable disease shall not be knowingly employed. The fattening of hogs or other animals on the refuse of slaughtering houses is not permitted on the premises. Butchers who dress diseased carcasses must cleanse their hands and disinfect them in a prescribed disinfectant before being allowed to

[1]The law under which meat inspection by the Federal Government is now carried on and regulated is, "An Act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1907, approved June 30, 1906 (34 Statute, 674), and U. S. Department of Agriculture, Bureau of Animal Industry, Order No. 150, Washington Gov. Print. Office, 1908. Effective April 1, 1908.

handle healthy carcasses. Inspectors are held to disinfect their knives after using them on diseased carcasses.

Ante-mortem examination and inspection must be made of all animals to be slaughtered before they are allowed to enter an establishment in which inspection is maintained. This examination is to be made in the pens, alleys or chutes of the establishment, at which the animals are about to be slaughtered. All animals showing symptoms of disease are to be marked by affixing to the ear or tail a metal tag. All animals so marked are to be slaughtered separately and are to be fully identified at the time of slaughter. If disease is suspected, such as Texas fever, anthrax, pneumonia, blackleg or septicemia, in which the question of temperature is important, the exact temperature must be taken. Consideration must be given to the fact that extremely high temperatures may be found in otherwise normal hogs when subjected to exercise and excitement. Animals known as "downers" or crippled animals must likewise be tagged on ante-mortem inspection.

Post-mortem inspection at the time of slaughter. The inspectors must, at the time of slaughter, make a careful inspection of all animals slaughtered. The head, tongue, tail, thymus gland, bladder, caul and the entire viscera and all parts and blood used in the preparation of meat food or medical products shall be retained in such a manner as to preserve their identity until after the post-mortem examination has been completed.

Carcasses and parts thereof found to be sound and fit for human food shall be passed, while carcasses with lesions of disease that would probably render the meat or any organ unfit for food shall be marked immediately with a tag, bearing the words, "U. S. Retained," and shall be removed to the retaining room. Here the carcass and organs so marked are to be subjected to a final inspection by a chief inspector, and if found unfit for human food they are to be stamped, "U. S. Inspected and Condemned." The tag so marked is to accompany the carcass, etc., to the condemning tank. If, however, upon final inspection,

the carcass is passed for food, the inspector shall stamp the carcass, "Inspected and passed."

Retaining and Condemned Rooms.—The regulations provide that there shall be set apart at all establishments at which inspection is maintained separate compartments, to be known as retaining rooms. All parts and carcasses marked "Retained" shall be held in these rooms pending final inspection. These rooms must be rat proof, and their floors shall be of cement, metal or brick laid in cement; they shall be provided with facilities for locking and the keys to the locks shall remain in the custody of the inspector or his assistant. The floors and walls of all retaining rooms shall be washed with hot water and disinfected after diseased animals are removed, and before any retained animals are again placed therein.

Disposal of Condemned Carcasses.—Carcasses or parts of them found on final inspection to be unfit for human food must be either destroyed within twenty-four hours or must be removed to the "condemned" room. This must be a room entirely separate from all other rooms in the establishment, must be provided with a lock, the key of which shall remain in the custody of an employe of the Bureau of Animal Industry, and all condemned meat must be taken into or from this room under the supervision of an inspector of the Bureau.

All condemned carcasses must be tanked, as follows: After the lower opening of the tank has been securely sealed by an employe of the B. of A. I., and the condemned parts have been placed therein in his presence, the upper opening shall be likewise sealed and the officer present must then see that a sufficient force of steam is turned into the tank and maintained a sufficient length of time effectually to render the contents unfit for any edible product. Tanks for this purpose shall be so located or operated that the fumes and odors therefrom shall not pervade rooms, etc., in which carcasses are dressed or edible products prepared. A sufficient quantity of coloring matter or other substance designated by the government shall be used in

connection with the tanking of all condemned carcasses to destroy them effectually for food purposes.

The seals of tanks containing condemned meat shall be broken only by an employe of the department.

Diseases for Which Carcasses or Parts Thereof or Organs Must Be Condemned.—The carcasses, etc., of all animals which are slaughtered and which are found at the time of slaughter or at any subsequent inspection to be affected with any of the diseases or conditions named below, must be condemned or disposed of as indicated:

Anthrax or Charbon.—All carcasses showing lesions of this disease, regardless of the extent of the disease, and including the hide, hoofs, horns, viscera, fat, blood and all other portions of the animal, shall be condemned and immediately tanked. The killing bed upon which the animal was slaughtered shall be disinfected with a 10 per cent solution of formalin, and all knives, saws, cleavers and other instruments which have come in contact with the carcass shall be treated as provided in a regulation mentioned above before being used upon another carcass.

Blackleg.—Carcasses of animals showing lesions of blackleg shall be condemned.

Hemorrhagic Septicemia.—Carcasses of animals affected with this disease shall be condemned.

Pyemia and Septicemia.—Carcasses showing lesions of either of these diseases shall be condemned.

Vaccine.—Animals with unhealed lesions accompanied by fever shall be condemned.

Rabies.—Carcasses of animals which showed symptoms of rabies before slaughter shall be condemned.

Tetanus.—Carcasses of animals which showed symptoms of tetanus before slaughter shall be condemned.

Malignant Epizootic Catarrh.—Carcasses of animals affected with this disease and showing generalized inflammation of the mucous membranes shall be condemned.

Hog Cholera and Swine Plague.—Carcasses showing well-marked and progressive lesions of hog cholera or swine plague in more than two of the organs (skin, kidneys, bones or lymphatic glands) shall be condemned. Provided they are well nourished, carcasses showing slight and limited lesions of these diseases may be passed. Carcasses which reveal lesions more numerous than those described for carcasses to be passed, but not so severe as the lesions described for carcasses to be condemned, may be rendered into lard, provided they are cooked by steam for four hours at a temperature not lower than 220° F. and at a pressure of 4 pounds. In inspecting carcasses showing lesions of hog cholera or swine plague of the skin, bones, kidneys or lymphatic glands, due consideration shall be given to the extent and severity of the lesions found in the viscera.

Actinomycosis, or Lumpy Jaw.—If a carcass is in a well-nourished condition and there is no evidence upon post-mortem examination that the disease has extended from a primary area of infection in the head, the carcass may be passed, but the head, including the tongue, shall be condemned. Carcasses of animals showing uncomplicated localized actinomycotic lesions other than, or in addition to, those specified in the first part of this section may be passed after the infected organs and parts have been removed and condemned. Carcasses of animals showing a generalized actinomycosis shall be condemned.

Caseous Lymphadenitis.—When the lesions are limited to the superficial lymphatic glands or to a few nodules in an organ, involving also the adjacent lymphatic glands, and the carcass is well nourished, the meat may be passed. after the affected parts are removed and condemned. If extensive lesions, with or without pleuritic adhesions, are found in the lungs, or if several of the visceral organs contain caseous nodules and the carcass is emaciated, it shall be condemned.

Texas Fever.—Carcasses showing sufficient lesions to warrant the diagnosis of Texas fever shall be condemned.

Parasitic Ictero-Hematuria.—Carcasses of sheep affected with this disease shall be condemned.

Mange, or Scab.—Carcasses of animals affected with mange, or scab, in advanced stages, shall be condemned. When the disease is slight the carcass may be passed.

Tapeworm Cysts.—Carcasses of animals slightly affected with tapeworm cysts may be rendered into lard or tallow, but extensively affected carcasses shall be condemned. Carcasses of animals infected with gid bladderworms (cænurus cerebralis, Multiceps socialis) may be passed after condemnation of the infected organ (brain, spinal cord). Carcasses or parts of them found infected with the hydatid cyst (echinococcus) may be passed after condemnation of the infected part or organ.

Infections That May Cause Meat Poisoning.—All carcasses of animals so infected that consumption of the meat or meat food products thereof may give rise to meat poisoning shall be condemned, namely all carcasses showing signs of: Acute inflammation of the lungs, pleura peritoneum, pericardium or meninges, septicemia or pyemia, whether puerperal, traumatic or without any evident cause. Severe hemorrhagic or gangrenous enteritis or gastritis, acute diffuse metritis or mammitis, polyarthritis, phlebitis of the umbilical veins, traumatic pericarditis or any other inflammation, abscess or suppurating sore, if associated with acute nephritis, fatty and degenerated liver, swollen soft spleen, marked pulmonary hyperemia, general swelling of lymphatic glands, and diffuse redness of the skin, either singly or in combination.

Icterus.—Carcasses showing an intense yellow or greenish-yellow discoloration after proper cooling shall be condemned. Carcasses which exhibit a yellowish tint directly after slaughter, but lose this discoloration on chilling, may be passed for food.

Uremia and Sexual Odor.—Carcasses which give off the odor of urine or a strong sexual odor shall be condemned.

Urticaria, Etc.—Hogs affected with urticaria (diamond skin disease), Tinea tonsurans, Demodex folliculorum or erythema

may be passed after detaching and condemning the skin, if the carcass is otherwise fit for food.

Melanosis, Etc.—Carcasses of animals showing any disease, such as generalized melanosis, pseudo-leukemia, etc., which affects the system of the animal, shall be condemned.

Bruises, Abscesses, Liver Flukes, Etc.—Any organ or part of a carcass which is badly bruised or which is affected by malignant tumors, abscesses, suppurating sores, or liver flukes shall be condemned, but when the lesions are so extensive as to affect the whole carcass, the whole carcass shall be condemned.

Emaciation and Anemia.—Carcasses of animals too emaciated or anemic to produce wholesome meat, and those carcasses which show a slimy degeneration of the fat or a serous infiltration of the muscles shall be condemned.

Milk Fever and Railroad Sickness.—Carcasses of animals showing symptoms of milk fever or railroad sickness at the time of slaughter shall be condemned, as the flesh of such animals is frequently darker in color and more watery than is natural, and the present view of the pathology of at least the first disease suggests autointoxication.

Pregnancy and Parturition.—Carcasses of animals in advanced stages of pregnancy (showing signs of preparation), also carcasses of animals which have within ten days given birth to young and in which there is no evidence of septic infection, may be rendered into lard or tallow, if desired by the manager of the establishment, otherwise they shall be condemned.

Immaturity.—Carcasses of animals too immature to produce wholesome meat, all unborn and stillborn animals, also carcasses of calves, pigs, kids, and lambs under three weeks of age, shall be condemned.

Diseased Parts.—In all cases where carcasses showing localized lesions of disease are passed or rendered into lard or tallow, the diseased parts must be removed before the "U. S. Retained" tag is taken from the carcass, and such parts shall be condemned.

Careless Scalding.—Hogs which have been allowed to pass into the scalding vat alive shall be condemned.

Dead Animals.—All animals that die in abattoir pens, and those in a dying condition before slaughter, shall be tagged as provided, and in all cases shall be condemned. In conveying animals which have died in the pens of the establishment to the tank they shall not be allowed to pass through compartments in which food products are prepared. No dead animal shall be brought into an establishment for rendering from outside the premises of said establishment.

Tuberculosis.—For the guidance in passing on carcasses affected with tuberculosis the following elaborate principles are laid down in the regulations for meat inspection:

Principle A.—The fundamental thought is that meat should not be used for food if it contains tubercle bacilli, if there is a reasonable possibility that it may contain tubercle bacilli, or if it is impregnated with toxic substances of tuberculosis or associated septic infections.

Principle B.—On the other hand, if the lesions are localized and not numerous, if there is no evidence of distribution of tubercle bacilli through the blood, or by other means, to the muscles or to parts that may be eaten with the muscles, and if the animal is well nourished and in good condition, there is no proof, or even reason to suspect, that the flesh is unwholesome.

Principle C.—Evidences of generalized tuberculosis are to be sought in such distribution and number of tuberculous lesions as can be explained only upon the supposition of the entrance of tubercle bacilli in considerable number into the systemic circulation. Significant of such generalization are the presence of numerous uniformly distributed tubercles throughout both lungs, also tubercles in the spleen, kidneys, bones, joints, and sexual glands, and in the lymphatic glands connected with these organs and parts, or in the splenic, renal, prescapular, popliteal, and inguinal glands, when several of these organs and parts are coincidentally affected.

Principle D.—By localized tuberculosis is understood tuberculosis limited to a single or several parts or organs of the body without evidence of recent invasion of numerous bacilli into the systemic circulation.

The following rule shall govern the disposal of tuberculous meat:

Rule A.—The entire carcass shall be condemned—

(*a*) When it was observed before the animal was killed that it was suffering with fever.

(*b*) When there is a tuberculous or other cachexia, as shown by anemia and emaciation.

(*c*) When the lesions of tuberculosis are generalized, as shown by their presence not only at the usual seats of primary infection, but also in parts of the carcass or the organs that may be reached by the bacilli of tuberculosis only when they are carried in the systemic circulation. Tuberculous lesions in any two of the following-mentioned organs are to be accepted as evidence of generalization when they occur in addition to local tuberculous lesions in the digestive or respiratory tracts, including the lymphatic glands connected therewith: Spleen, kidney, uterus, udder, ovary, testicle, adrenal gland, brain, or spinal cord or their membranes. Numerous uniformly distributed tubercles throughout both lungs also afford evidence of generalization.

(*d*) When the lesions of tuberculosis are found in the muscles or intermuscular tissue or bones or joints, or in the body lymphatic glands as a result of draining the muscles, bones, or joints.

(*e*) When the lesions are extensive in one or both body cavities.

(*f*) When the lesions are multiple, acute, and actively progressive. (Evidence of active progress consists in signs of acute inflammation about the lesions, or liquefaction necrosis, or the presence of young tubercles.)

Rule B.—An organ or a part of a carcass shall be condemned—

(*a*) When it contains lesions of tuberculosis.

(*b*) When the lesion is immediately adjacent to the flesh, as

in the case of tuberculosis of the parietal pleura or peritoneum, not only the membrane or part affected but also the adjacent thoracic or abdominal wall is to be condemned.

(*c*) When it has been contaminated by tuberculous material, through contact with the floor, a soiled knife, or otherwise.

(*d*) All heads showing lesions of tuberculosis shall be condemned.

(*e*) An organ shall be condemned when the corresponding lymphatic gland is tuberculous.

Rule C.—The carcass, if the tuberculous lesions are limited to a single or several parts or organs of the body (except as noted in Rule A), without evidence of recent invasion of tubercle bacilli into the systemic circulation, shall be passed after the parts containing the localized lesions are removed and condemned in accordance with Rule B.

Rule D.—Carcasses which reveal lesions more numerous than those described for carcasses to be passed (Rule C), but not so severe as the lesions described for carcasses to be condemned (Rule A), may be rendered into lard or tallow if the distribution of the lesions is such that all parts containing tuberculous lesions can be removed. Such carcasses shall be cooked by steam at a temperature not lower than 220 degrees Fahrenheit for not less than four hours.

Dyes, Chemicals and Preservatives.—No meat or meat product for interstate or foreign commerce shall contain any substance which lessens its wholesomeness, nor any drug, chemical or dye (unless specifically provided for by a federal statute) or preservative other than common salt, sugar, wood smoke, vinegar, pure spices and salt peter. Inspection is to be conducted in such manner and at such times as to secure a rigid enforcement of this regulation. However, meats, etc., prepared for export may contain preservatives in proportions which do not conflict with the laws of the foreign country to which they are to be exported. Such meats and meat products, however, must be

prepared in separate compartments, must be kept separate and must be provided with special labels. Products such as meat juice, meat extract, etc., which are intended only for medicinal purposes, and are advertised only to the medical profession are not considered meat products within the meaning of the meat inspection law.

False and Deceptive Names.—The regulations issued under the latter also provide that any label used on boxes, cans, etc., must not by words, picture, design, or device give any false indication of origin or quality. Any statement regarding the virtues or properties of the material contained in the package that is false in any particular is prohibited by law; for instance, the picture of a pig appearing on a label which is placed upon beef product, the picture of a chicken appearing upon a label placed upon a product composed of veal or pork. Words, as "Special," "Superior," "Fancy," "Selected," etc., placed upon products which are more inferior than implied by the term used are false and deceptive.

Geographical names must be used only upon foods produced and manufactured in the place, state or territory or country named, or if not produced there with such words as "Cut," "Type," "Brand," or "Style;" for instance, "English Style Brawn," "Bologna Style Sausage," etc. Names indicating or imitative of distinctive type or breeds of live stock cannot be used unless the product is actually made of the meat from animals of those breeds.

Lards, Lard Compounds and Lard Substitutes.—All tins or other containers of lard, lard compounds, or lard substitutes must be so marked as to clearly indicate the ingredients from which made. Leaf lard must be made from the leaf fat only, and no other part of the hog can be added thereto. Kettle rendered or kettle lard may be rendered in either open or closed kettles, not under pressure, and no live steam must come in contact with the product. When labeled "Open Kettle Rendered," it must

be rendered in an open kettle. Pure lard, made from sweet, clear, and clean hog fat to which not to exceed 5 per cent of pure, sweet lard stearin has been added, may be labeled "Pure Lard." If lard contains more than 5 per cent of added lard stearin, or any per cent of other stearin, the addition must be so stated on the label, with the name of the kind of stearin used; for example, "Pure Lard with Lard Stearin Added," or "Pure Lard with Oleo Stearin Added," or "Lard with Oleo Stearin Added," or "Lard with Tallow Added." When the word "Pure" is used in connection with the word "Lard," the lard must be made only from sweet, clean, clear hog fat. In all such cases the lard must equal or exceed in quantity the added animal fat. The words "Pure Lard with . . . . Added," cannot be used when any ingredient other than pure, clean animal fat is added. The percentage of added stearin or other animal fat may be given, if desired. A substance composed of lard, stearin, or other animal fat and a vegetable oil may be labeled "Lard Compound," but in such case the names of all the ingredients must be shown upon the label; and in all cases the proportion of lard must be equal to or greater than any other one of the ingredients. In compounds, or lard substitutes, if the compound has a distinctive name, the distinctive name may be used without the word "Compound," and in all cases the ingredients must be stated on the label. In all cases only sweet and clean edible stearin and sweet and clean edible fats shall be used.

Fines Under the Law.—The meat inspection law provides that any person, firm or corporation who shall violate any of these provisions, shall be deemed guilty of a misdemeanor, and shall be punished on conviction thereof by a fine of not exceeding ten thousand dollars, or imprisonment for a period of not more than two years, or by both such fine and imprisonment, in the discretion of the court. Bribing or bribe-taking under the law is punishable by from five thousand to ten thousand dollars and imprisonment from one to three years, or by both. The pro-

visions of the meat inspection act do not apply to animals slaughtered by any farmer on the farm and sold and transported as interstate or foreign commerce, nor to retail butchers and retail dealers in meat and meat food products, supplying their customers. However, if any person whatever sells for interstate or foreign commerce any meat knowing that it is derived from diseased animals, and also knowing that it is intended for use as food stuff, he shall, after conviction, be punished by a fine of not more than one thousand dollars, or by imprisonment not exceeding one year, or by both such fine and imprisonment.

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